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VOL. XI, NO. 3 SEPTEMBER, 1933

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Research Bulletin

OF THE

National Education Association

Constructive Economy in Education

No Research Bulletin was issued in May, 1933. The Research Bulletin immediately preceding this one was Volume XI, No. 2, March, 1933, "Salaries in City School Systems, 1932-33." It is hoped that an extra bulletin to substitute for the omitted May issue can be published later this year.

PUBLISHED BY THE RESEARCH DIVISION OF THE

NATIONAL EDUCATION ASSOCIATION

1201 SIXTEENTH STREET NORTHWEST, WASHINGTON, D. C.

Research Bulletin of the National Education Association

Published five times each year in January, March, May, September, and November by the Research Division of the National Education Association of the United States.
President, JESSIE GRAY *Secretary*, J. W. CRABTREE

The payment of the $5 membership fee of the National Education Association entitles one to receive the Research Bulletin, the Journal, the Annual Volume of Addresses and Proceedings, and certain other publications of the National Education Association for one year. One dollar of each $5 membership fee is for a year's subscription to the Research Bulletin. The Research Bulletin may be subscribed for separately at a subscription price of $1 per year. Copies may be purchased for 25 cents, and in quantities at a reduced rate. Those entitled to receive the Research Bulletin regularly are asked to report at once any change of address, giving old as well as new address.

Entered as second-class matter February 10, 1923, at the Post Office at Washington, D. C., under Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized February 10, 1923.

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TABLE OF CONTENTS

	Page
Foreword	58
I. Some Basic Principles of Economy	59
II. An Efficient Staff: A Prerequisite for Economy	61
III. The Budget as an Instrument for Economy	66
IV. Economy and the Unit of Administration	70
V. Economy and School Organization	73
VI. Supervision as a Means of Economy	75
VII. Economy in the Management of School Supplies	77
VIII. Economy in the School Insurance Program	81
IX. The Management and Protection of School Funds	84
X. Teachers' Salaries and Teacher Load	88

LIST OF TABLES

	Page
1. Number of Teachers Compared With Administrative Officers and Other Employees, 1932-33	62
2. Standards Compared With Practice in Certain School Services	62
3. Recent Practice and Proposed Standards for Distribution of Current School Expenses	67
4. School Budgetary Practices in Cities Below 100,000 Population, 1931-32	67
5. Standards for Administering School Budgets	68–9
6. Comparative Prices Under Individual and Cooperative Purchasing as Reported by Two Studies	78
7. Estimated and Actual Economies in School Fire Insurance	82
8. Size of Class in City School Systems, 1930-31	89
9. Salaries Paid Teachers in the United States, 1932-33	89

LIST OF CHARTS

	Page
I. Number of Pupils Enrolled Per Janitor in 1929-30 in 79 Cities Over 100,000 in Population	63
II. Number of Pupils in Average Daily Attendance per School Clerk, 1930-31 in 84 Cities Over 100,000 in Population	63
III. Number of Pupils in Average Daily Attendance per School Nurse, 1930-31 in 66 Cities Over 100,000 in Population	63
IV. Number of Children of School Age per Attendance Officer, 1929-30 in 59 Cities Over 100,000 in Population	63
V. Comparisons of Achievement in Large and Small Rural Schools	70

FOREWORD

THE RISING responsibilities and costs of public education prior to 1930 and the pressure of current financial conditions since then have stimulated a large amount of research bearing on economical school administration. It is not the primary purpose of this bulletin to add to this body of material, but rather to review the findings of some of the more important studies already completed by the Research Division and other agencies and to organize the material so as to show its bearing on school economy.

Other studies by the Research Division show the extent and nature of curtailments already made. In some communities, retrenchments in school funds have been so severe that all idea of economy has necessarily been sacrificed and the only question has been whether or not it would be possible to operate the public schools at all. In more fortunate communities, however, there remains room for choice as to the types of retrenchment that will be put into effect. Whether school budgets are to be reduced at all and, if so, by what amount, are very largely local problems which must be locally decided. However, regardless of the amount of money available for schools, there are efficient ways and inefficient ways of spending it. There is a vast difference both in theory and in practice between arbitrary slashing of school budgets and a sound policy of securing the utmost value from the expenditure of school funds. The former is easy but destructive; the latter, difficult but constructive.

The problem of economy in public education is as wide as education itself. On the theoretical side, economy touches the entire basis, scope, and function of the public school system. On the practical side, economy is co-extensive with the field of school administration in general. Clearly, a publication of this type and size must be limited to a few issues. For this reason, capital outlay and plant management have been practically omitted. It is hoped that the material presented in this bulletin will be useful to school officials in studying local problems of financial and educational adjustment, and arriving at sound conclusions with respect to them.

J. W. CRABTREE, *Secretary,*
National Education Association

I. Some Basic Principles of Economy

Economy has to do with getting value received for money expended. *Retrenchments* are simply policies which result in spending less money; *savings* bring about the spending of less money without loss of efficiency; *economies* result in greater efficiency for every dollar spent.

Certain general principles as to the nature of real economy have been developed by recent writers on educational and governmental administration. Before proceeding to review more detailed aspects of economical school administration, eight of these general principles will be listed.

1. *Education a basic function*—Education is a basic social, economic, and political function. Its importance demands adequate and continuous financing from public sources (1, 8, 13, 15, 16, 20, 21, 23).*

2. *Economy and efficiency*—Economy is a concept inseparable from efficiency. If reduced expenditures mean lowered educational efficiency, there has been no economy (3, 6, 7, 12, 13, 16, 22).

3. *Economic ability a limiting factor*—The support of public enterprises, as a whole, cannot safely exceed the economic ability of the nation to pay for them (9, 12, 14, 15, 23).

4. *Professional judgment needed in making fiscal adjustments*—While the determination of the total appropriation for education rests with the people and their representatives, the choice among various services which might be eliminated or curtailed should involve professional experience and judgment. Antiquity is not a safe basis for retaining some services and curtailing others. Some of the so-called fads may really be more important than other phases of the school program which have been inherited from the needs and problems of the past (3, 6, 9, 16, 22).

5. *Welfare of childhood the primary criterion*—Economies should be effected only with the ultimate educational welfare of children as the basic criterion (3, 7, 13, 16, 21, 22, 23).

6. *Planning for the future*—Economies should be considered in the light of a well-devised plan for the future needs and developments of public education (7, 8, 11, 22).

7. *Economy must be related to services demanded*—Economy in education should take into consideration the volume and urgency of the demands made upon the schools, as compared with the demands made upon other agencies (4, 8, 18, 23).

8. *Civic responsibility of education*—The support of education out of public revenues is justified by the contribution of the schools to well-balanced, complete, and effective citizenship (2, 8, 11, 17, 22).

References on Basic Principles

1. Bogan, William J. "The Insurance Policy of Democracy." *Journal of the National Education Association* 21: 213-15; October, 1932.
2. Briggs, Thomas H. *The Great Investment.* Cambridge: Harvard University Press, 1930. 143 p. (The Inglis Lecture, 1930).
3. Camp, Frederick S., chairman. *Report of Special Committee on Emergency Finance.* New Haven: Connecticut Association of Public School Superintendents, 1932. Mimeographed, 17 p.
4. Carr, William G. "More Schooling for Children as an Unemployment Relief Measure." Reprinted from the *New York Herald-Tribune,* Sunday, December 28, 1930. 8 p.
5. Cooper, William John. *Economy in Education.* Stanford University: Stanford University, 1933. 82 p.
6. Cubberley, Ellwood P. *Public School Administration.* Boston: Houghton Mifflin Co., 1929. p. 526-31.
7. Henzlik, F. E.; Richards, W. M.; Ireland, Clifford J.; and others. *Practical Economies in School Administration.* Lincoln: University of Nebraska, Extension Division, March, 1932. p. 7-9. (Educational Monographs, No. 3.)
8. Judd, Charles H. "Education, the Nation's Safeguard." *Official Report.* Washington, D. C.: Department of Superintendence, National Education Association, February, 1932. p. 35-43.
9. King, Clyde L., editor. "Competency and Economy in Public Expenditures." *The Annals* 113: 1-366; May, 1924. Philadelphia: American Academy of Political and Social Science.
10. Linn, H. H. *Practical School Economies.* New York: Teachers College, Columbia University, 1933. In press.
11. Miller, H. J. "The Problem of Reducing School Costs." *American School Board Journal* 83: 33-34; December, 1931.
12. National Education Association, Department of Superintendence and Research Division. *Some Trends in City School Finance, 1932-33.* Educational Research Service, Circular No. 5, 1932. Washington, D. C.: the Association, May,

* Numbers in the text throughout refer to the numbered list of references at the end of each main section.

1932. 34 p. See also *Supplement to Circular No. 5, May, 1932,* issued September 30, 1932. 6 p.

13. National Education Association, Research Division. *Childhood and the Depression: A Look Ahead.* Washington, D. C.: the Association, November, 1931. 42 p.
14. National Education Association, Research Division. "Facts on School Costs." *Research Bulletin* 10: 203-26; November, 1932. Washington, D. C.: the Association.
15. National Education Association, Research Division. "Investing in Public Education." *Research Bulletin* 8: 166-219; September, 1930. Washington, D. C.: the Association.
16. New Jersey Annual Conferences of Commissioner of Education and Superintendents of Schools. *Economy in School Administration.* (Education Bulletin, Vol. 18, No. 7.) Trenton: State Department of Public Instruction, March, 1932. 742 p.
17. Norton, John K. "Education and the Economic Depression." *School and Society* 34: 271-78; August 29, 1931.
18. Proffitt, Maris M. "The Schools and Unemployment." *School Life* 17: 41-42; November, 1931.
19. Reavis, William C. "Improvement and Economy in Secondary-School Administration." *American School Board Journal* 85: 27-28; April, 1933.
20. Strayer, George D. "Adequate Support of Education, the Condition of an Effective Service." *Official Report.* Washington, D. C.: Department of Superintendence, National Education Association, February, 1932. p. 83-86.
21. Waterman, Ivan R. and Heffernan, Helen. *Maintaining Educational Efficiency During Emergency.* Sacramento: California Department of Education, March, 1933. 26 p.
22. Weglein, David E., chairman. *Report.* Committee on School Costs. Washington, D. C.: Department of Superintendence. National Education Association, February, 1932. 36 p.
23. Wilbur, Ray Lyman, chairman. *Report of Proceedings.* Citizens' Conference on the Crisis in Education. Washington, D. C.: American Council on Education, 744 Jackson Place, 1933. 112 p.

For further bibliography, see especially references 13 and 22, above.

Public education cannot adjust its program to the economic cycle as readily as can private business. Production or services to be rendered cannot be curtailed or stopped. A new generation of children enters the schools each year irrespective of the current financial conditions. The schools must carry on. If the fundamental democratic conception of education is to be applied fairly and if all children are to benefit equally in terms of their capacity from the services provided, then the opportunities offered in times of depression cannot be different from those made available during times of prosperity for a child entering school during a financial depression may be deprived of the education to which he is entitled. Considered from this point of view, educational service may be compared with perishable products. Financial management has for its duty and obligation the preservation of these vital and fundamental opportunities.—N. L. Engelhardt and Fred Engelhardt. *Public School Business Administration,* p. 14.

II. An Efficient Staff: A Prerequisite for Economy

Efficient organization of the public school staff determines the effectiveness of the school system. To be adequate for its responsibilities, the staff must be composed of a sufficient number of capable members. On methods of assigning authority and duties depends how smoothly the staff will function. Working conditions, office equipment, and clerical assistance are also important factors.

Competent leadership—An efficient staff depends upon trained professional leadership. The 1933 Yearbook of the Department of Superintendence includes information on requirements for admission to administrative positions in public education, and a scale for evaluating educational leadership (20). Following appointment, consideration of economy requires skillful allotments of time and responsibility. Henzlik and many others have prepared schedules to assist the superintendent to make the most of his time (12).

Adequacy—Although financial and other conditions may indicate the need for a reduction in administrative or teaching personnel, there is a point beyond which reducing the size of the staff should not go. The number of pupils enrolled, the distribution of these pupils among the grades, the number of teachers employed, and the size of the school buildings are among the most important factors determining the number of administrative staff members desirable. Actual practice in city schools is summarized in Table 1. However, in smaller school systems many employees reported as principals and supervisors have in addition some teaching duties. The table shows that for every central administrative officer in the large cities with over 100,000 population there are 138 teachers. This ratio drops suddenly with the transition to the cities of Group II and decreases more evenly for the remaining groups of smaller cities.

McGinnis found that at least ten factors conditioned the type, size, and efficiency of the administrative staff. These factors are: the requirements of state laws, the division of executive and legislative functions between the school board and the superintendent, the status of the superintendent, the recommendations made by school surveys, the aggressiveness of the superintendent, the financial ability of the community, the plan of school organization, the educational needs of the community, the educational offerings of the school system, and the general efficiency and relative cost of the schools (17).

Standards and practices compared—Various authorities have proposed certain standards for the number of school nurses, school janitors, school clerks, and attendance officers, as well as for certain other employees. Obviously, the higher the standard, either in quantity or quality of service, the more satisfactory the program. Table 2 shows several of these proposed standards, and compares these standards with the average of practice in the larger cities of the country. A picture of the trends in practices in these cities together with average of practice and the standards fixed is displayed in Charts I, II, III and IV. It is clear that the general average of practice employs fewer persons than would be required by the standards set up as desirable for clerical, janitorial, health, and attendance services by authorities in these fields. The average practice falls short of the standards, proposed by 66 percent in the case of janitor service, by 80 percent in the case of clerical workers, 55 percent in the case of nurses, and 114 percent in the case of attendance officers. All of the charts reveal wide ranges in practice. The distributions are all scattered out along the right of the base line, showing in each case a few extreme cases where the services concerned are very meagerly supplied.

Delegation of responsibility—Agreement is quite general with respect to the efficient and economical assignments of authority and responsibility. That the board of education should adopt general policies; that the superintendent should execute these policies and report back to the board; that the superintendent's staff, in all except the smallest communities, should include an assistant trained and skilled in the management of business affairs; that the superintendent, as the chief executive officer of the board, should be the responsible agent for the entire school program in its educational, business, and legal aspects—these are among the widely accepted general principles which, if adopted everywhere in American school systems, would save large sums of money and increase school efficiency at the same time (4, 10, 13, 17, 21, 24).

Remuneration of school officers and tax collectors—A special phase of administration on which small economies may be effected has to

TABLE 1.—NUMBER OF TEACHERS COMPARED WITH ADMINISTRATIVE OFFICERS AND OTHER EMPLOYEES, 1932-33

Size of Cities	Number of cities reporting data	Number of Teachers per: Principal [1]	Dean or dept. head	School nurse	School clerk	School janitor	Attendance officer	Central administrative officer [2]	Central supervisory officer [3]
1	2	3	4	5	6	7	8	9	10
I Over 100,000 in Population	88	21	78	138	18	15	148	138	95
II 30,000 to 100,000 in Population	210	18	54	100	27	9	405	44	42
III 10,000 to 30,000 in Population	457	14	.....	181	42	9	388	22	23
IV 5,000 to 10,000 in Population	508	12	.....	144	64	9	234	15	19
V 2,500 to 5,000 in Population	648	14	.....	134	79	11	213	13	22

Read table as follows: In 88 cities over 100,000 in population, there are 21 teachers to every principal, 78 teachers for each Department head, 138 to every school nurse, etc.

Data assembled by Research Division, in connection with its biennial salary survey.

[1] Includes both supervising and teaching principals.

[2] Includes superintendents of schools, associate, assistant or deputy superintendent, business managers, secretaries of boards of education, superintendents of buildings and grounds, chief attendance officers, secretaries to superintendents, head janitors, miscellaneous other administrative officers, and all executive assistants of such officers.

[3] Includes directors, assistant directors, supervisors and assistant supervisors of research, tests, and measurements, vocational education, manual training, home economics, physical education, health, art, music, penmanship, continuation schools, evening schools, Americanization classes, kindergartens, primary grades, intermediate grades, junior high schools, and senior high schools, head nurses, and miscellaneous other supervisory officers.

TABLE 2.—STANDARDS COMPARED WITH PRACTICE IN CERTAIN SCHOOL SERVICES

Type of Service	Standards Proposed: Authority	Standards Proposed: Standard	Average Practice in Cities Over 100,000 Population, 1929-31 [1]: Practice	Average Practice in Cities Over 100,000 Population, 1929-31 [1]: Number of cities reporting
1	2	3	4	5
Janitors	Engelhardt, Reeves, and Womrath (8)	One janitor-engineer per 16,000 sq. ft. floor area One janitor-engineer per 2 acres ground space [2] One janitor-engineer per 250 pupils enrolled	One janitor per 414 pupils enrolled	79
School Clerks	Cubberley (2)	One school clerk per 12 to 15 teachers (approximately one clerk per 300 pupils in average daily attendance)	One clerk per 539 pupils in average daily attendance	84
School Nurses	McGinnis (17) Stoddard (26)	One school nurse per 1200–1500 pupils [3] One full-time nurse per 1500 pupils	One school nurse per 2,318 pupils in average daily attendance	66
Attendance Officers	Gideon (10) Emmons (3)	One officer per 3000 pupils of school age	One officer per 6,432 pupils of school age	59

[1] Calculated from data of the U. S. Office of Education.

[2] Excluding area covered by buildings.

[3] Represents standard set up by Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University.

CHART I

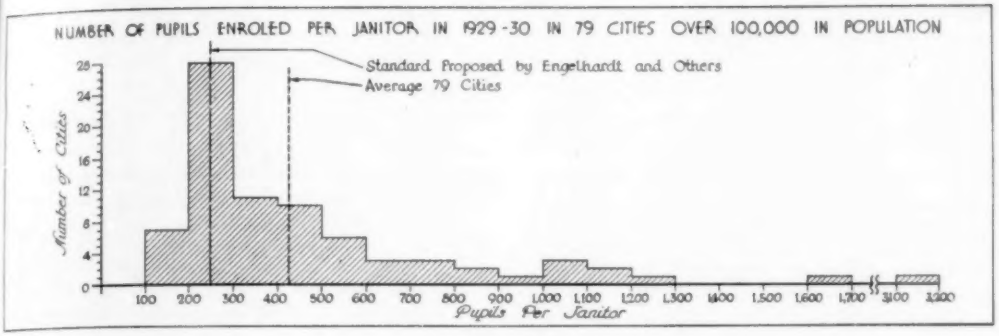

NUMBER OF PUPILS ENROLED PER JANITOR IN 1929-30 IN 79 CITIES OVER 100,000 IN POPULATION
Standard Proposed by Engelhardt and Others
Average 79 Cities
Number of Cities
Pupils Per Janitor

CHART II

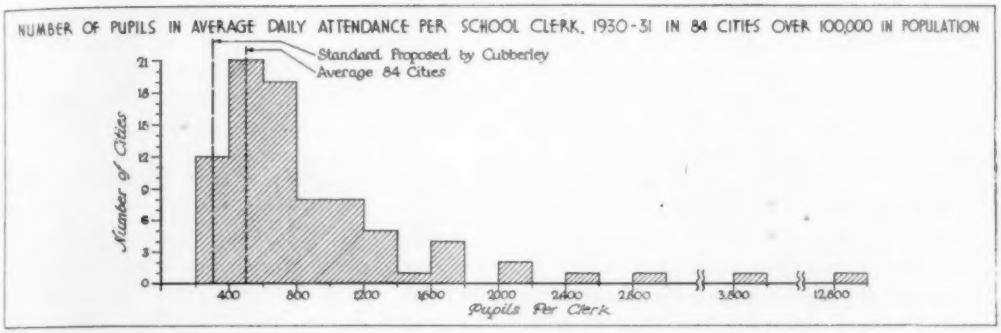

NUMBER OF PUPILS IN AVERAGE DAILY ATTENDANCE PER SCHOOL CLERK, 1930-31 IN 84 CITIES OVER 100,000 IN POPULATION
Standard Proposed by Cubberley
Average 84 Cities
Number of Cities
Pupils Per Clerk

CHART III

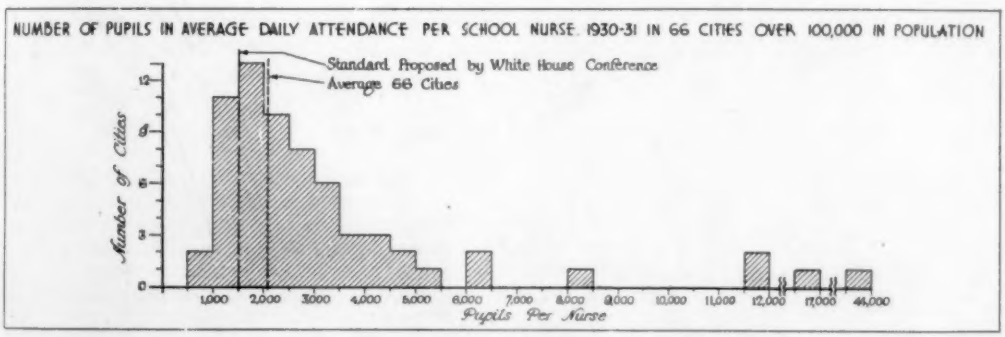
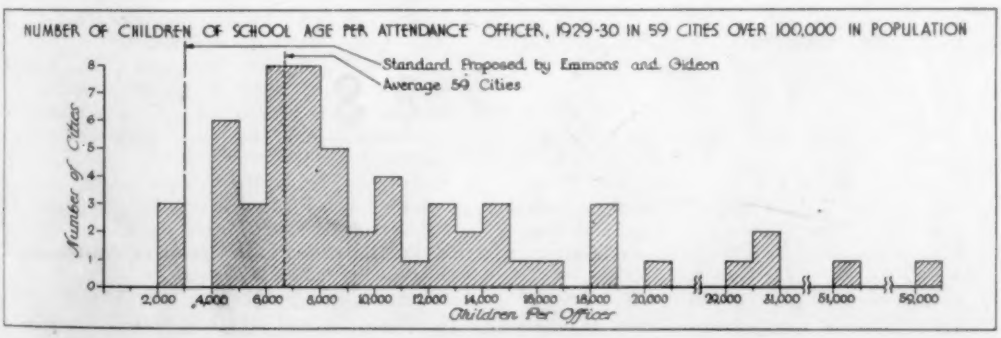

NUMBER OF PUPILS IN AVERAGE DAILY ATTENDANCE PER SCHOOL NURSE, 1930-31 IN 66 CITIES OVER 100,000 IN POPULATION
Standard Proposed by White House Conference
Average 66 Cities
Number of Cities
Pupils Per Nurse

CHART IV


NUMBER OF CHILDREN OF SCHOOL AGE PER ATTENDANCE OFFICER, 1929-30 IN 59 CITIES OVER 100,000 IN POPULATION
Standard Proposed by Emmons and Gideon
Average 59 Cities
Number of Cities
Children Per Officer

do with the salaries and fees paid to school board members, school board attorneys, and tax collectors. The Indiana Rural Survey found that in 1924 salaries paid township trustees and city school board members reached a total of 763,700 (14). If a board of education leaves, as it should, executive and professional functions to the superintendent, there is little occasion for paying salary to the members (5, 10). After a survey of municipal and county expenditures in New Jersey, Lutz concluded that, "In most cases the officers of the districts and the county superintendents could satisfactorily perform the functions exercised by the attorney and without cost to the district" (15). As for the cost of tax collections, it has been shown in Pennsylvania, for example, that the cost of collecting $100 in school taxes varies from sixty cents up to as much as $12.50, or one-eighth of the money collected (23). Henzlik found that, in Nebraska, the fees of the county treasurers for collecting school taxes amount to nearly $250,000 a year (12). According to Engelhardt, there are communities in the United States where the annual fees paid to the school tax collector exceed the annual salary paid to its chief executive (6). Such expenses could often be greatly reduced by a proper coordination and direction of the tax-levying and collecting machinery. Overn, (22) after a study of methods and results in school tax collections in twelve states, concludes that a centralized plan is more economical than the use of special school tax collectors.

Clerical services—Retrenchment in clerical assistance for the professional staff of a school system may or may not be a real economy. If such retrenchments require the staff to neglect part of their professional work in order to handle jobs that could be done better and more cheaply by clerical workers, then obviously waste rather than economy has resulted. The lack of clerical services in smaller cities is apparent (see column 6, Table 1). Some schools have been successful in the use of student clerical assistance, drawn from the commercial training classes. Pupils should be used in this way only when the educational values received by them are at least as great as would be obtained otherwise (12). Clerical employees should be carefully and impartially selected and standards for their service and performance should be set up and enforced (4, 11).

Office equipment and working conditions—The progress of school work can be facilitated or retarded by the office equipment provided, and the spirit of cooperation among the staff members. With the development of administrative technic has come the demand for more and better equipment of the school executives' offices. The Department of Elementary School Principals and other agencies have made useful reports and recommendations concerning office practice and equipment (1, 13, 18).

References on Efficient Staff

1. Campbell, Fallen. "Filing Equipment and Indexing for County Superintendents' Offices." *American School Board Journal* 78: 96, 98, 100, 102; April, 1929.
2. Cubberley, Ellwood P. *The Principal and His School.* Boston: Houghton Mifflin Co., 1923. p. 191.
3. Emmons, Frederick Earle. *City School Attendance Service.* Contributions to Education, No. 200. New York: Teachers College, Columbia University, 1926. 173 p.
4. Engelhardt, Fred. *Public School Organization and Administration.* Boston: Ginn and Co., 1931. 595 p. Chapters 2, 17-19.
5. Englehardt, Fred.; Overn, A. V.; and Sackett, E. B. *The Cost of Collecting School Taxes in Minnesota.* Minneapolis, Minn.: University of Minnesota, College of Education, 1926. 17 p.
6. Englehardt, N. L. "Financial Economies Which May Be Effected Through Improved Business Administration." *School Executives Magazine* 51: 99-101, 132, 136; November, 1931.
7. Engelhardt, N. L.; Kincaid, W. A.; and Parker, J. C. *Selected and Annotated Bibliography on School Attendance, School Census, and Related Topics, 1900-1932.* Circular No. 59. Washington, D. C.: U. S. Department of the Interior, Office of Education, November, 1932. 38 p.
8. Engelhardt, N. L.; Reeves, Charles E.; and Womrath, George F. *Survey Data Book for Public School Janitorial-Engineering Service.* New York: Teachers College, Columbia University, 1932. p. 13.
9. Gideon, Henry J. "How Shall the Number of Attendance Officers in a Community Be Determined and Selected?" *American School Board Journal* 74: 45, 148, 150; February, 1927.
10. Graves, Frank Pierrepont. *The Administration of American Education.* New York: Macmillan Co., 1932. 631 p.
11. Henderson, Louise H. "Clerical Service in City School Systems." *Bulletin (Eighth Yearbook)* 8: 318-26; April, 1929. Washington, D. C.: National Education Association, Department of Elementary School Principals.
12. Henzlik, F. E.; Richards, W. M.; Ireland, Clifford J.; and others. *Practical Economies*

in School Administration. Lincoln; University of Nebraska, Extension Division, March, 1932. p. 10-19. (Educational Monographs, No. 3.)

13. HUNKINS, R. V. *The Superintendent at Work in Smaller Schools*. Boston: D. C. Heath and Co., 1931. 401 p. Especially Chapters 3, 7.
14. INDIANA RURAL EDUCATION SURVEY COMMITTEE. *Report*. Indianapolis: State Department of Public Instruction, 1926. p. 77-78.
15. LUTZ, HARLEY L., director. *A Report on Educational Services and Costs*. Report No. 8. Trenton, N. J.: Commission to Investigate County and Municipal Taxation and Expenditures, 1932. p. 45-46.
16. MCGEE, RALPH K. "The Working Schedule of the Superintendent of Schools." *American School Board Journal* 76: 66, 144, 146; May, 1928.
17. MCGINNIS, WILLIAM C. *School Administrative and Supervisory Organizations in Cities of 20,000 to 50,000 Population*. Contributions to Education, No. 392. New York: Teachers College, Columbia University, 1929. p. 66.
18. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS. "The Elementary School Principalship." *Bulletin (Seventh Yearbook)* 7: 132-638; April, 1928. Washington, D. C.: the Association.
19. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS. "The Principal and Administration." *Bulletin (Ninth Yearbook)* 9: 129-731; April, 1930. Washington, D. C.: the Association. Chapter 4, p. 193-216.
20. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE. "Educational Leadership." *Eleventh Yearbook*. Washington, D. C.: the Association, February, 1933. 528 p.
21. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "The School Board Member." *Research Bulletin* 11: 1-42; January, 1933. Washington, D. C.: the Association. See particularly p. 22-33.
22. OVERN, A. V. "A Determination of the Cost of Collecting Taxes for Schools." *American School Board Journal* 74: 46-47, 158, 161; March, 1927.
23. RULE, JAMES N. *Suggested Economies in School Administration to Meet the Financial Emergency*. Harrisburg, Pa.: Superintendent of Public Instruction, Department of Public Instruction, March 12, 1932. Multigraphed, 8 p.
24. SMITH, HARRY P. *Business Administration of Public Schools*. Yonkers-on-Hudson, N. Y.: World Book Co., 1929. Chapter 4.
25. "Some School Attendance Problems." *American School Board Journal* 81: 36; December, 1930.
26. STODDARD, A. J., Chairman of Sub-Committee, White House Conference on Child Health and Protection. *The Administration of the School Health Program*. New York: Century Co., 1932. p. 18.
27. STRAYER, GEORGE D., director. *Report of the Survey of the Schools of Chicago, Illinois*. New York: Teachers College, Columbia University, 1932. Vol. 5. p. 9-31.
28. WEGLEIN, DAVID E., chairman. *Report*. Committee on School Costs. Washington, D. C.: Department of Superintendence, National Education Association, February, 1932. 36 p.

For additional bibliography, consult references 5, 7, 10, and 24.

WE OWE so much to our public schools and so readily take them for granted that we may fail to recognize how careful we should be in any projected program of economy in education. The people of our nation have gone through an economic crisis of great severity and have in spite of it retained good health, good order, and stability. This is evidence of an informed public. For this we may certainly credit our public school system more than any other factor. The American school has brought about in each community a mutual understanding which has permitted unusual cooperation in these times of difficulty. Before we change any essential element in our public school system, then, we must be sure that we are not damaging it, for it provides the best guaranty of continued national life that we have.

Now that we have come to the point where there must be some reduction in the educational charge upon the taxpayer, at least for the time being, we must first of all exhaust those opportunities for saving which involve no serious damage to the school child.

Whatever else we may do to meet the present crisis we must maintain and build up our public school system. It is inevitable that the school system should develop all along the line, and particularly at the top, in order to meet the increasing responsibility thrust upon it by our advancing civilization. Economy we must have. Every dollar must be made to count. But that economy must not and need not be made at the expense of the child.—Ray Lyman Wilbur. Foreword, p. iii-iv, *Economy in Education*, by William John Cooper.

III. The Budget as an Instrument for Economy

The budget as a means of financial control—The Committee on School Costs states that few factors contribute more effectively to economy and to efficiency than sound budgetary procedure. A good school budget exemplifies in financial terms the major phases of the community's educational policy. It involves a careful, scientific estimate of the costs and income. The balancing of the budget as between estimates of income and expenditure goes far to guarantee solvency. When a school system operates under such a budget, the board of education should, by its own rules, require that expenditures shall not be made in excess of budgetary appropriations, except as the matter has been brought before it for reconsideration. Such a policy, the Committee adds, will tend to eliminate hasty and ill-conceived additions to the program, or those even less justified expenditures which arise from the enthusiasm of the moment or the desire to satisfy some person or group bringing pressure to bear upon the administrative officer (22).

Comparing budgets—After a plan of expenditures has been worked out by a given school district, comparison with budgets formulated by other school districts is helpful. Recent practices and proposed standards are shown in Table 3.

Standards for the school budget—Useful standards for appraising the school budget, as developed by Clark (2), Linn (11), Moehlman (12), and Soper (19) are summarized in Table 5. Procedures used in preparing budgets have been studied by Twente (21), Engelhardt (5), De Young (4), and Featherstone (7). Attempts to determine standard budgetary allotments for the various school services have been made by Toothaker (20), Dawson (3), Hunter (9), and Moehlman (13).

School budgetary practices—How do current school budgetary practices correspond to the standards proposed in Table 5? De Young recently analyzed procedures in 821 school systems during 1931-32. The schools included in his study are located in cities of from 5,000 to 100,000 population, and represent every state. Information on 18 practices has been adapted from De Young's study to make up Table 4.

1. *Preparation*—Most superintendents (99 percent in 1931) take part in preparing at least the statement of educational policies underlying the budget.

Seventy percent of the schools studied in 1931 prepare the budget prior to the beginning of the fiscal year. Twelve percent prepare, in addition, a tentative budget for more than a year in advance.

2. *Form of the budget*—Analysis of budget details in 821 school systems showed that the percent of systems including certain items were: (1) Estimated expenditures, 97.5 percent; (2) Estimated receipts, 90.1 percent; (3) Estimated expenditures, as compared with previous years, 76.1 percent; (4) Estimated receipts, as compared with previous years, 67.8 percent; (5) Capital outlay, 76.8 percent; (6) Debt service, 71.8 percent; (7) Probable balance, 62.8 percent; (8) Tax rate necessary to secure the levy, 60.5 percent; (9) Assessed valuation of school district, 57.6 percent; (10) Tax rate in comparison with previous years, 45.7 percent; (11) Written explanations of decreases and increases, 42.5 percent; (12) Assessed valuation in terms of per capita or per pupil wealth, 10.8 percent.

3. *Presentation*—Table 4 shows that the board of education generally knows in advance that the budget is to be presented. On transmitting the budget, 349 out of 817 schools provide written explanations of decreases or increases. Newspaper reporters attend board meetings when the budget is presented in 267 out of 689 schools.

4. *Adoption*—The board of education in half the systems adopts the budget before the fiscal year begins. The same proportion adopts the budget at the meeting when first presented.

5. *Execution*—The board of education controls the school budgetary administration by keeping track of budget balances. The board is informed periodically concerning the current condition of the funds, balances, and overdrafts, in 91.4 percent of the 819 school systems reporting. Budget balances are reported monthly in three-fourths of the systems. Almost 60 percent of the systems follow the practice of transferring funds from one main heading to another heading. Forty percent of the systems permit such transfers only upon vote of the board of education. To further safeguard budgetary administration, an independent audit is made each year, in 73.9 percent of the school systems.

TABLE 3.—RECENT PRACTICE AND PROPOSED STANDARDS FOR DISTRIBUTION OF CURRENT SCHOOL EXPENSES

Practice or Standard	Percent of Total Current Expense Allotted to:					
	General Control	Instruction	Operation of Plant	Maintenance of Plant	Co-ordinate Activities and Auxiliary Agencies	Fixed Charges
1	2	3	4	5	6	7
48 States[1]	4.3	72.3	9.5	3.9	5.3	4.7
65 Cities, over 100,000 in Population[2]	3.2	77.5	8.7	3.8	3.0	3.8
75 Cities, 30,000 to 100,000[2]	3.4	78.4	10.3	3.3	2.8	1.8
75 Cities, 10,000 to 30,000[2]	3.9	75.9	11.7	3.5	3.0	2.0
75 Cities, 2,500 to 10,000[2]	5.4	73.3	11.9	3.5	4.2	1.7
Moehlman's Standards (13)	5.0	75.0	12.0	5.0	2.0	1.0
Toothaker's Standards (20)	4.0	74.0	11.0	4.0	5.0	2.0[3]

[1] National Education Association, Department of Superintendence and Research Division. *Expenditures and Personnel for Public Elementary and Secondary Day Schools, State School Systems, 1930–31.* Educational Research Service, Circular No. 11, 1932. Washington, D. C.: the Association, November, 1932. 22 p.

[2] Comstock, Lula Mae. *Per Capita Costs in City Schools for 1931-32.* U. S. Department of the Interior, Office of Education, Circular No. 73. Washington, D. C.: the Office of Education, January, 1933. Mimeographed, 12 p.

[3] Item listed under heading "Miscellaneous."

TABLE 4.—SCHOOL BUDGETARY PRACTICES IN CITIES BELOW 100,000 POPULATION, 1931-32

Practices	Number of Replies	Schools Following Practice	
		Number	Percent
1	2	3	4
I. Preparation and form of budget:			
1. Prepared before the fiscal year begins	816	566	70.0
2. Estimated expenditures determined on basis of unit costs	794	230	28.9
3. Based on adequate accounting system	794	601	75.6
4. Major classifications same as in annual financial report at end of year	794	691	87.0
II. Presentation of budget:			
5. Board of education knows in advance budget is to be presented	817	723	88.5
6. Written explanations of increases and decreases submitted	817	349	42.7
7. Newspapers print articles regarding the budget prior to its adoption	689	233	33.8
III. Official adoption of the budget:			
8. Before fiscal year begins	816	435	53.3
9. In meeting at which first presented	802	431	53.7
10. Within 14 days following initial presentation	802	555	69.2
11. By roll call vote	808	391	48.4
12. Adoption formally recorded in board minute book	808	687	85.0
13. Copy of complete budget recorded in minutes	808	576	71.3
IV. Administration of budget:			
14. Board of education informed periodically as to current condition of funds, balances, and overdrafts	819	750	91.4
15. Emergency fund included	819	293	35.8
16. Funds placed under one main heading (i. e., maintenance), transferred to another main heading only upon vote of board of education	819	331	40.4
17. Independent audit each year	794	587	73.9
18. Accrual system used for supplies and purchases	794	133	16.7

Information on budget practices adapted from Tables 4, 8, 10, 12-16, 19-20, in De Young, Chris. A., *Budgetary Practices in Public School Administration.*

TABLE 5.—STANDARDS FOR ADMINISTERING SCHOOL BUDGETS[1]

Standards	Clark (2)	Linn (11)	Moehlman (12)	Soper (19)
1	2	3	4	5
I. Preparation				
1. By whom prepared	Superintendent in charge	Superintendent and staff	Superintendent or staff	Superintendent and/or business manager
2. Basis of estimate of expenses	Experience of at least 5 years as shown by data on unit costs, new services, probable enrolments, salary schedule	Experience of preceding years	Educational policies translated into financial terms	Averages for previous years with data on unit costs, wealth, and population trends
3. Basis of estimate of revenues	Experience of past as revealed by data on wealth, valuation, tax rates, incomes from fees and subsidies, and debts outstanding	Experience of preceding years	.....	Forecasted on a combination of revenues
4. When prepared	As near spending time as possible, but early enough to allow full discussion. Two months in advance of fiscal year is suggested	.....	.....	A fixed budgetary calendar prepared in advance
5. Time and cost of preparation	Budget uses a minimum of labor and material and results in real savings. Relatively little time consumed. In smaller cities (below 30,000) not more than 3 weeks of superintendent's time	.....	.....	.....
II. Form of the budget				
6. Forms used	Standard forms and a budget book	.....	.....	Standard and uniform blanks in conformity with bookkeeping procedure
7. Amount of detail	All necessary information for comprehension and control including twenty to fifty or more subdivisions suggested. No item of expense, however small, omitted	Anticipated receipts and expenditures given in detail	Activity analysis with supporting detail on salaries, supplies, and equipment; subanalyses for maintenance, outlay and debt service; generalized summary	.....
8. Requests	Requests for amounts actually needed	.....	.....	Consistent with anticipated needs
III. Presentation				
9. Point of view	.....	.....	In terms of educational policy rather than directly from financial angle	.....
10. Time of presentation	.....	.....	.....	Before close of fiscal year
11. Provision for discussion and publicity	Public notice should be given and hearings allowed	Public encouraged to participate in planning budget.	Introductory statement should explain services and costs	.....
	Budget should supply publicity information without additional labor. Data from other cities and for other years available	Annual statement of receipts and expenditures in printed report or given newspaper publicity.	Budget should lend itself easily to full information and adequate publicity	Adequate publicity through newspapers
IV. Voting and approval				
12. Approving authority	.....	.....	.....	Board of education
13. Method of voting	Not by small divisions	.....	In terms of large educational policies and not by small financial items	.....
14. Changes by approving body	Does not change at all, but requires the executive to adjust details	.....	.....	Insignificant
15. Expenses not foreseen	Not incurred; or if incurred handled by emergency appropriations	Some elasticity allowed in administering budget, with limited, controlled approval of the board	Board should specifically pass upon all expenditures not provided for in budget	.....

[1] The entire discussion of these writers may be consulted for many important details which cannot be summarized in tabular form.

TABLE 5.—STANDARDS FOR ADMINISTERING SCHOOL BUDGETS (Continued)

Standards	Clark (2)	Linn (11)	Moehlman (12)	Soper (19)
1	2	3	4	5
V. Execution				
16. Administration of budget	Executive or staff	School officials	Superintendent is responsible agent	Superintendent and staff
17. Control of expenditure	Monthly statements of disbursements against each appropriation. All requisitions compared with unencumbered balances before approved	Monthly statements of receipts and expenditures submitted to board. Monthly check of expenditures, outstanding orders, and obligations, compared with appropriations to show unencumbered balances under each heading of the budget	Expenditures should be carefully and constantly checked against policy, need, and appropriation. Departments should be informed of funds available before opening of fiscal year	Administration held responsible for limiting expenditures to appropriation
18. Provision for deficiencies	Properly handled transfers	.....	.....	Cared for by legitimate transfers or contingency appropriations
19. Borrowing	None should be necessary, except what is included in budget	.....	.....	No borrowing
20. Surplus or deficit	Should not exceed 1% of budget	.....	Expenditures should agree with budget within 2%	Should not exceed 1% of budget
21. Accounting and auditing	Complete audit by independent agent reporting direct to board. Appropriations charged when bills are incurred	Audit by professional auditors at least once a year; in case of smaller school systems, biennial audit may be sufficient	Budget should be keyed to accounting system	Audit by disinterested accountants annually

References on the Budget

1. BUCK, A. E. *Public Budgeting.* New York: Harper and Bros., 1929. 612 p.
2. CLARK, HAROLD F. "Suggestions for Scoring School Budgets." *American School Board Journal* 71: 47-48, 133-34; October, 1925.
3. DAWSON, HOWARD A. *Standards of Expenditures for the Principal Items of City School Costs.* Nashville, Tenn.: George Peabody College for Teachers, 1927. 173 p.
4. DE YOUNG, CHRIS A. *Budgetary Practices in Public School Administration.* Evanston, Ill.: Northwestern University, 1932. 152 p.
5. ENGELHARDT, N. L. "Superior School Budgets." *School Executives Magazine* 50: 309-10; March, 1931.
6. ENGELHARDT, N. L., and ENGELHARDT, FRED. *Public School Business Administration.* New York: Teachers College, Columbia University, 1927. 1068 p. See especially Chapter 22.
7. FEATHERSTONE, W. B. "An Analysis of 112 Representative City School Budgets." *School Executives Magazine* 50: 307-09; March, 1931.
8. HUNKINS, R. V. *The Superintendent at Work in Smaller Schools.* Boston: D. C. Heath and Co., 1931. 401 p. Especially Chapters 3, 7.
9. HUNTER, FRED M. "Efficient Expenditures of School Moneys." *Proceedings, 1928.* Vol. 66. Washington, D. C.: National Education Association, 1928. p. 713-17.
10. LINDSAY, E. E. *Problems in School Administration.* New York: Macmillan Co., 1928. Chapter 4, "School Budgets," p. 77-98.
11. LINN, H. H. *Practical School Economies.* New York: Teachers College, Columbia University, 1933. In press. See *American School Board Journal* 87: 31-32, 62-63; July, 1933.
12. MOEHLMAN, ARTHUR B. "The Public-School Budget." *Review of Educational Research* 2: 105-07; April, 1932. Washington, D. C.: American Educational Research Association.
13. MOEHLMAN, ARTHUR B. *Public School Finance.* Chicago: Rand McNally and Co., 1927. p. 482-83.
14. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE. "Five Unifying Factors in American Education." *Ninth Yearbook.* Washington, D. C.: the Association, February, 1931. 543 p.
15. NATIONAL EDUCATION ASSOCIATION. *Some Trends in City School Finance 1932-33.* Educational Research Service. Supplement to Circular No. 5, May, 1932. Washington, D. C.: the Association, September 30, 1932. 6 p.
16. REEDER, WARD G. *The Business Administration of a School System.* Boston: Ginn and Co., 1929. 454 p. See especially Chapter 4.
17. SEYFRIED, JOHN E. *Public-School Budgetary Procedure in New Mexico.* Albuquerque, N. Mex.: University of New Mexico Press, 1932. 27 p.
18. SMITH, HARRY P. *Business Administration of Public Schools.* Yonkers-on-Hudson, N. Y.: World Book Co., 1929. Chapter 5.
19. SOPER, WAYNE. "By Their Budgets You May Know Them." *School Executives Magazine* 49: 310-12, 343; March, 1930.
20. TOOTHAKER, O. H. "A Basic Standard for the School Budget." *American School Board Journal* 67: 47-48; September, 1923.
21. TWENTE, JOHN W. *Budgetary Procedure for a Local School System.* Montpelier, Vt.: Capital City Press, 1923. 184 p.
22. WEGLEIN, DAVID E., chairman. *Report.* Committee on School Costs. Washington, D. C.: National Education Association, February, 1932. 36 p.

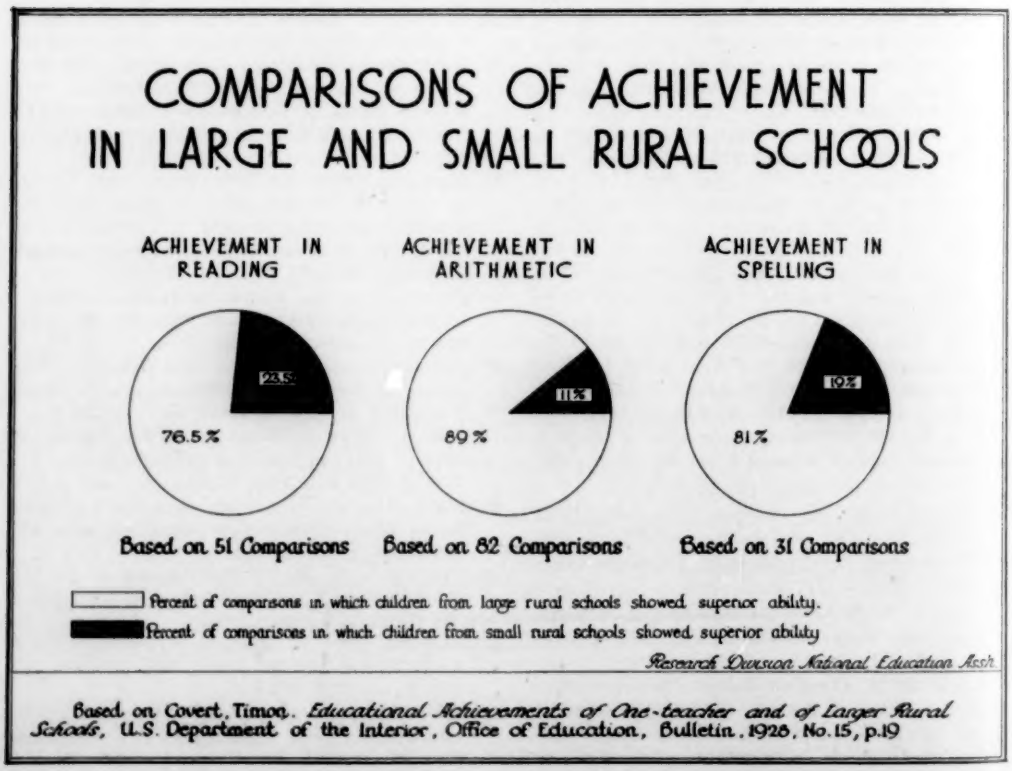
IV. Economy and the Unit of Administration

Among the most expensive schools now maintained in America, in proportion to number of pupils served, are the 148,000 one-room rural schools and the 12,000 small rural high schools of less than 100 pupils. Sparseness of population requires that many of these schools be maintained, relatively expensive and limited though they may be. But many of these schools could be operated with greater economy by consolidating their services at a single center or by administering a large group of them as a single unit.

Rural school units—Studies in this field have recently been summarized by Reeder and Holmstedt (20). Cook showed that in Connecticut consolidated schools actually cost less per child than one-room schools, in spite of the fact that the consolidated schools provided transportation and paid higher salaries to better trained teachers (6). In Indiana a survey committee estimated that cash savings of $1,796,000 would be achieved by a county unit plan for the schools, this sum not including additional savings due to increased educational efficiency and decreased overhead expenses (12). An estimate by Burris predicted a total net savings for the same state, through administration on the county unit basis, of $3,782,000, representing reduced costs for salaries of trustees, office expense, supplies, equipment, permanent improvements, and teachers institutes, but excluding transportation costs (4). McClellan estimated that a financial saving of 22 percent could be realized in one Ohio county by adoption of the county unit of school organization (20). Elimination of the 1858 rural and village boards of education in this state would make possible a saving of $371,600 (23). Smart calculated a saving of 12 percent through consolidation in one Kansas community (21), and Williams estimated a similar saving of 5 percent for one county in California (25).

While the mere consolidation of rural schools or adoption of a large unit of administration is not in itself a guarantee of either savings or increased efficiency, a large number of stud-

CHART V


COMPARISONS OF ACHIEVEMENT IN LARGE AND SMALL RURAL SCHOOLS
ACHIEVEMENT IN READING
23.5
76.5%
Based on 51 Comparisons
ACHIEVEMENT IN ARITHMETIC
11%
89%
Based on 82 Comparisons
ACHIEVEMENT IN SPELLING
19%
81%
Based on 31 Comparisons
Percent of comparisons in which children from large rural schools showed superior ability.
Percent of comparisons in which children from small rural schools showed superior ability
Research Division National Education Ass'n
Based on Covert, Timon. Educational Achievements of One-teacher and of Larger Rural Schools, U.S. Department of the Interior, Office of Education, Bulletin, 1928, No. 15, p. 19

ies (17, 18) indicate that pupils in the larger rural schools are learning more, as shown by objective measures of school achievement. See Chart V. However, some writers contend that type of school organization is a relatively insignificant factor in determining school achievement, particularly in the lower grades (15, 26).

Rural high schools—Nanninga showed that in the smaller high schools of California per pupil costs decreased and curricular offerings increased with the size of the school, a high degree of efficiency being attained in schools of about 600 pupils (16). A study of 226 high schools in Oregon (22), 10 high schools in Illinois and Indiana (13), and 423 high school districts in Wisconsin (8) showed that the larger schools have advantages in economy. Hood, after studying instruction costs in 56 small Massachusetts high schools, suggests a curriculum for the small high school which aims to offer good educational opportunities at a reasonable cost. His plan calls for the elimination of certain advanced courses not required for college entrance, the substitution of courses in commercial subjects, household arts, and agriculture, the alternation of elective courses, and the use of correspondence courses (11). Althaus and Twente recommend preparation of a maximum and minimum list of subjects, to be offered in rural high schools of various sizes (1). Broady, Platt, and Bell suggest schedules to fit conditions in small elementary schools and high schools (3). Gaumnitz (9) and Windes (27) have suggested, in addition, the possibility of itinerant teachers paid out of state or county funds and the cooperative employment of certain teachers by two or more small high schools. Besides the writers mentioned, correspondence courses in small high schools have been described and studied by Diamond (7), Castle (5), Long (14), Broady, Platt, and Bell (3), and by Wooden and Mort (28).

References on the Unit of Administration

1. ALTHAUS, C. B., and TWENTE, J. W. "The Organization and Financing of Rural High Schools in Kansas." *Bulletin of the University of Kansas* 33: 1-48; July 1, 1932. Lawrence, Kansas.
2. BOLTON, FREDERICK E. "Is the County Unit Necessary for Effective Rural School Development?" *School and Society* 35: 237-43; February 20, 1932.
3. BROADY, KNUTE O.; PLATT, EARL T.; and BELL, MILLARD D. *Practical Procedures for Enriching the Curriculums of Small Schools.* Lincoln, Nebr.: University of Nebraska, Extension Division, June, 1931. 88 p. (Educational Monographs, Number 2.)
4. BURRIS, BENJAMIN J. "Necessity of the County Unit for the Efficient Administration of Rural Schools." *Journal of Rural Education* 2: 304-11; March, 1923. See p. 310.
5. CASTLE, A. W. "Enrichment of Secondary School Courses of Study by the Use of Correspondence Courses." *Proceedings, 1931.* Vol. 69. Washington, D. C.: National Education Association, 1931. p. 331-39.
6. COOK, KATHERINE M. "By What Standard Shall School Costs Be Measured?" *School Life* 11: 35; October, 1925.
7. DIAMOND, THOMAS. "Cooperation Between a Correspondence School and a Public High School." *Educational Review* 71: 37-41; January, 1926.
8. FOWLKES, JOHN GUY. "Lowering School Costs and Raising the Quality of Instruction." *Nation's Schools* 10: 66-67; September, 1932.
9. GAUMNITZ, WALTER H. *The Smallness of America's Rural High Schools.* U. S. Department of the Interior, Office of Education, Bulletin, 1930, No. 13. Washington, D. C.: Government Printing Office, 1930. 78 p.
10. HENZLIK, F. E.; RICHARDS, W. M.; IRELAND, CLIFFORD J.; and others. *Practical Economies in School Administration.* Lincoln, Nebr.: University of Nebraska, Extension Division, March, 1932. p. 151-59. (Educational Monographs, No. 3.)
11. HOOD, J. T. "Instruction Costs in Typical Small High Schools—a Study." *Nation's Schools* 4: 63-68, 38-42; September, November, 1929.
12. INDIANA RURAL EDUCATION SURVEY COMMITTEE. *Report.* Indianapolis: State Department of Public Instruction, 1926. p. 108.
13. KARNS, LOREN V. "Analyzing Instructional Costs in Ten Small High Schools." *Nation's Schools* 10: 35-40; December, 1932.
14. LONG, FORREST E. "Correspondence Study in the Small High School." *Junior-Senior High School Clearing House* 4: 236-42; December, 1929.
15. MYERS, CHARLES EVERETT. "The One-Teacher School, Front and Center." *Journal of Rural Education* 3: 439-49; May-June, 1924.
16. NANNINGA, S. P. "Costs and Offerings of California High Schools in Relation to Size." *Journal of Educational Research* 24: 356-64; December, 1931.
17. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "The Outlook for Rural Education." *Research Bulletin* 9: 230-302; September, 1931. Washington, D. C.: the Association. "Efficient Units of Administration," p. 238-44.
18. NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. "The Status of Rural Education." *Thirtieth Yearbook, Part I.* Bloomington, Ill.: Public School Publishing Co., 1931. p. 193-206.
19. OHIO EDUCATION ASSOCIATION, COMMITTEE ON POSSIBLE ECONOMIES IN EDUCATIONAL ADMINISTRATION. *Report.* Columbus, Ohio: the Association, 1931. Mimeographed, 10 p.

20. Reeder, Ward G., and Holmstedt, R. W. "Financial Economies in Business Management of Schools." *Review of Educational Research* 2: 139-47; April, 1932. Washington, D. C.: American Educational Research Association, National Education Association. Chapter 8.
21. Smart, Thomas J. "How Better Schools for Less Money May Be Made Available for a Kansas Community." *University of Kansas Bulletin of Education* 3: 3-19; February, 1931. See p. 4.
22. Stetson, F. L. "Instructional Costs in 226 Standard High Schools." *University of Oregon Publication* 2: 301-24; August, 1931. Eugene, Oregon.
23. Waits, Logan A. "A Waste of Public Funds." *American School Board Journal* 85: 42-43; December, 1932.
24. Weglein, David E., chairman. *Report.* Committee on School Costs. Washington, D. C.: Department of Superintendence, National Education Association, February, 1932. p. 18.
25. Williams, J. Harold. *Reorganizing a County System of Rural Schools—Report of a Study of the Schools of San Mateo County, California.* U. S. Department of the Interior, Bureau of Education, Bulletin, 1916, No. 16. Washington, D. C.: Government Printing Office, 1916. 50 p.
26. Wilson, Frank T. "Achievement in Fundamental Subjects in Some Rural Schools in Connecticut." *Journal of Rural Education* 3: 19-27; September, 1923.
27. Windes, E. E. "Possibilities of Individualized Instruction in Small High Schools." *School and Society* 21: 489-93; April 25, 1925.
28. Wooden, H. Z., and Mort, Paul R. "Supervised Correspondence Study for High School Pupils." *Teachers College Record* 30: 447-52; February, 1929.

For additional bibliography, see references 10, 17, 20, 24.

Economy means getting your money's worth. It means getting the maximum service for every dollar expended. One test of economy is the relation of the service to the price paid for it. If the same or better service can be obtained for less money, then present practice entails waste. If, by paying less, the quality of the service declines, to reduce expenditures involves curtailment, even waste. This is true as well in the field of education as in the field of government or of business.

Evidently, then, to the extent that a school system is operated in accordance with sound administrative practices, economies are being achieved. This being true, we must be careful at present not to penalize those schools which are already being administered with a high degree of effectiveness. A school which has been carelessly operated is sometimes asked to make no greater reduction in its budget than is a well-managed school. The poorly-managed school may make large reductions, thereby satisfying the public demands for budgetary reductions, and yet not be reduced to the state where efficient service is impossible. On the other hand, the better-managed school may be forced into taking such reductions in appropriations as will undermine its effectiveness.

Equality of educational opportunity for rich and poor alike, for those who receive their schooling during periods of prosperity and for those who attend school during the lean years, is a principle of education which is accepted by every thinking individual. This is no time for panic, for thoughtlessly slashing the school budget. Every proposal for saving must be weighed in the light of its effect upon the educational opportunities of the children who are now attending school or will attend in the future.—F. E. Henzlik; W. M. Richards; Clifford J. Ireland; and others. *Practical Economies in School Administration,* p. 7-8

V. Economy and School Organization

A number of changes in the organization of public education have been suggested as methods for bringing about worthwhile economies. Among the more prominent of these suggestions are the adoption or extension of a platoon school program, the discarding of semi-annual promotions to return to annual promotions, and the operation of schools on an all-year plan.

The platoon school—According to Case (2), there were in 1929, 1,068 platoon schools in the United States, located in 202 cities and enrolling 729,924 pupils. This is about 6 percent of all pupils enrolled in city school systems. Differences of opinion exist regarding the fiscal aspects of this movement. The arguments for the platoon school from the standpoint of economy have been thus summarized by Case (2):

1. The capacity of buildings is increased by taking children from regular classrooms and teaching them part of the time in auditorium, gymnasium, or library. A study of 18 platoon schools in Birmingham, Alabama, shows an increase of 18 percent in the total capacity of these schools.

2. The equipment in platoon schools is used more completely and less duplication of expensive apparatus is required. It has been estimated that Newark, New Jersey, saved $15,120 on classroom seats and desks alone by changing 12 schools to the platoon basis.

3. A saving is effected in instructional costs because of: (a) reduction in supervisory needs; (b) use of fewer teachers; (c) lowering of teacher turnover; and (d) increased efficiency.

Platoon organization is said to have increased the capacity of schools in Detroit, and in Birmingham. In the case of seventy-five new or remodeled buildings, the increase amounted to about 33 1/3 percent. In old buildings, not remodeled, it was from 5 to 25 percent. To replace the savings in capacity would have required erection of fifteen buildings, at an estimated cost of over $6,500,000 (9). In a general statement concerning the platoon plan, the U. S. Office of Education indicates that a 30-class school organized on this basis would release $180,000 for other activities (10). Wilson (12) summarizing the arguments against the platoon school, questioned its economy and cited the Gary Survey (5) as indicating that the cost per pupil for buildings in a platoon school is about equal to that in a non-platoon school. His argument, insofar as it applies to economy and efficiency, may be abstracted as follows:

1. *The first distinctive feature claimed for the platoon school is that any plant of a given size, if organized as a platoon school will serve more pupils.* . . . Figures indicate that the per pupil cost for providing a plant for a platoon school is about equal to, or somewhat greater than, that for a non-platoon school. . . . Much more serious than this is the large number of different pupils, running into the hundreds, each special subject teacher must care for per day and per week. Correspondingly serious is the number of different teachers each child must meet. . . . There is further the health menace of seating pupils of all grades in seats of a given size. . . . [The platoon school] was not originated to supply better learning conditions, but to take care of the increasing numbers in rapidly growing cities.

2. *The second distinctive feature of the platoon school consists in the plan and extent of departmentalizing the work.* . . . The almost inevitable result . . . is an absence of natural working and learning conditions. . . . With the drill work divorced from the more cultural subjects . . . it is very apt to be formal, routine-like, and mechanical, lacking in fundamental motive. . . .

3. *The third distinctive feature of the platoon school is that all pupils and classes in a building change types and places of work at the same time.* . . . The great danger is, of course, that the mechanics . . . may be so magnified and given such right of way as to lessen greatly the very results the school seeks to accomplish. This is just what is in danger of happening in the platoon school. Natural ways of working with resulting learning can hardly be programmed with such mathematical, mechanical, machine-like accuracy. . . .

Promotions—According to the *Ninth Yearbook* of the Department of Superintendence of the National Education Association (6), semi-annual promotions are the rule in more than 80 percent of cities over 100,000 in population. In smaller cities, however, the great majority of schools promote pupils annually. About half of all cities report that in the elementary schools they promote "a considerable number of special cases at any time during the school year."

A review of the opinions of 555 city school superintendents reveals two points of view with respect to the relation between economy and frequency of promotion (6). Many superintendents believe that semi-annual promotion is expensive, especially in small schools, because mid-year classes are small and thus the employment of more teachers is required. On the other hand, it is argued that semi-annual promotions reduce operating expenses because when pupils must repeat work, it is more economical to have the repetition restricted to a

half year. There appears to be no conclusive study as to the relative merits of these two contentions. It seems probable, however, that, in the smaller school systems particularly, annual promotions supplemented by a liberal use of special promotions and placements would be the most economical kind of organization.

All-year schools—Maintaining schools for twelve months each year has been tried in Newark, N. J.; Nashville, Tenn.; and Aliquippa, Pa. Research as to results has been summarized by Reavis (7). There is disagreement as to whether this practice effects economies. It should be remembered that the institution involved is not an ordinary summer school, but the approximately complete maintenance of all school facilities throughout the year. Bachman (1) reported that the all-year school in Nashville increased instructional costs by 21 percent without comparable gain in achievement. On the other hand, Roe (8) concluded that an all-year school in Newark cost 4 percent more than a ten-month school, but produced 44 percent more graduates. The cost per graduate was computed at $857 in the all-year school and $1349 in the ten-month school. A more elaborate survey of the same problem by O'Shea and Farrand (4) computed that all-year schools in Newark increased the cost by only $150,000 out of a total budget of $9,000,000. In Aliquippa, pupils generally attend school for any three out of the four quarters. The superintendent estimated an annual saving on current expense of $15,523 (11).

References on School Organization

1. Bachman, Frank P., director. *The All-Year School of Nashville, Tennessee.* Nashville: Division of Surveys and Field Studies, George Peabody College for Teachers, 1931. Chapter 9.
2. Case, R. D. *The Platoon School in America.* Stanford University, Calif.: Stanford University Press, 1931. 283 p.
3. Diemer, G. W. "The Platoon School." *Elementary School Journal* 25: 734-44; June, 1925.
4. Farrand, Wilson, and O'Shea, M. V. *The All Year Schools of Newark, N. J.* 96 p. (Publisher and date not specified)
5. General Education Board. *The Gary Public Schools.* New York: the Board, 1918. 8 volumes. Vol. 1, "A General Account;" Vol. 3, "Costs."
6. National Education Association, Department of Superintendence. "Five Unifying Factors in American Education." *Ninth Yearbook.* Washington, D. C.: the Association, February, 1931. p. 65-67, Tables 10 and 11.
7. Reavis, W. C. "Evaluation of the Various Units of the Public School System." *Review of Educational Research* 1: 173-99; June, 1931. Washington, D. C.: American Educational Research Association, a department of the National Education Association.
8. Roe, Warren A. "Comparative Costs of Integrated All-Year Schooling and of Part-Time Schooling." *Educational Method* 10: 350-58; March, 1931.
9. Spain, Charles L. "The Platoon School—Its Advantages." *Elementary School Journal* 26: 733-44; June, 1926.
10. U. S. Department of the Interior, Bureau of Education. *General Statement in Regard to the Work-Study-Play or Platoon Plan.* Washington, D. C.: the Department. No date. Mimeographed, 2 p.
11. Vanderlice, H. R. "The All-Year School in Aliquippa, Pennsylvania." *Elementary School Journal* 30: 576-85; April, 1930.
12. Wilson, H. B. "The Platoon School—Its Disadvantages." *Proceedings,* 1926. Vol. 64. Washington, D. C.: National Education Association, 1926. p. 800-09.

The question which we shall consider primarily is virtually the question of retrenchment versus economy. Retrenchment can be made at any time. Incomes can be cut off. If it is now necessary to give a school less income than it had, shall this be done by retrenching or by economizing? Retrenchment can be made by anyone who has the power to levy the taxes. Economies can be practiced only by the professional experts who have charge of the school system. . . . Retrenchment may occur suddenly. Economy requires much study. Retrenchment is simply a reduction in expenditure. Economy also involves reduction, but it means wiser spending of the money that we have, including some consideration of what is essential in public education.—William John Cooper. *Economy in Education,* p. 5.

VI. Supervision as a Means of Economy

The value of proper supervision in both rural and city school systems has been clearly shown by a series of investigations (1, 7, 12, 14, 17, 18, 19, 20). Good supervision will do more than merely increase the scores of children on standard achievement tests. It should develop the teaching corps into "a group of professional workers who attack their problems scientifically" (17). It should eliminate waste of time and money due to the failure of pupils to progress steadily through the school system (7, 11, 24).

Number of supervisors—No general formula can be proposed for the proper number of supervisory officers in city school systems. The quality of the teaching staff, the extent and diversity of the educational needs of the community, the way in which the staff is organized, and the size and location of school buildings are among the factors which complicate the situation (1, 12, 17).

However, it may be stated that, in general, the payment of higher salaries to supervisors is predicated on the fact that these officers are enabled to carry on supervisory functions. This general statement would apply to all types of supervisors, but especially to school principals and department heads. These officers should be expected to do constructive supervisory work and their responsibilities should be adjusted so as to make this possible. For example, a composite of several expert judgments suggests that elementary school principals should devote approximately forty percent of their time to supervision, whereas studies of the actual distribution of their time show that many principals cannot or do not meet this standard (12, 14). These facts suggest the need for careful local surveys of the amount of supervisory service being secured by the expenditures made for this purpose. If the survey indicates a need for adjustment, the solution may lie in the direction of better budgeting of the principal's time (15), or of relieving him of clerical or other duties which he should not be carrying. After analyzing the educational staffs of cities between 20,000 and 50,000 in population, McGinnis suggests these ten supervisory officials as the "*minimum* number for desirable practice": one general supervisor, a director of research, a supervisor of atypical classes, one supervisor each for art, music, health, manual arts, household arts, and two for physical education (11). Ayer and Barr, summarizing studies of opinion and practice by Halnon and Daily, tentatively suggest that the desirable number of teachers per supervisor is less than 100 (1). For rural areas, Reynolds suggests not more than fifty teachers per supervisor (23).

The average ratio between teachers and supervisors in 1932-33 is summarized in columns 3 and 10, Table 1, page 62. In the smaller cities many employees classified as principals or supervisors also carry teaching duties. The ratio between supervisors and teachers, which is 1 supervisor to 95 teachers in the largest cities, decreases rapidly with size of city, except that the cities of Group V tend to resemble those of Group III. In cities of 2500 to 5000 population there are 22 teachers to each supervisory officer. The same trend is evident for principals.

Types of adjustment—Among the more specific methods suggested by recent writers for the reduction of supervisory costs are: substitution of the home-room plan for the house-principal plan (13), using "key teachers" instead of highly-paid department heads (13, 26), having the superintendent in small school systems carry a principalship as well (22), integration of the supervisory staff and relieving supervisors of administrative responsibilities (3, 27), elimination of vice-principalships and assistant principalships, the combination of elementary schools in large districts for supervisory purposes (8, 22), reduction in the number of special subject supervisors by requiring the regular classroom teachers to be responsible for these subjects (1, 5, 12), assigning some teaching duties to principals in small schools (25), employing special supervisors jointly with other systems (25), and making the supervisory staff conscious of the need for economy (4). Increasing the supervisory load in larger school districts, as suggested by Kersey, involves possible assignment of elementary school principals as supervisory principals of several schools, decrease in the number of supervisory officers maintained in the central administrative staff, and substitution of supervisors in general fields rather than in special subjects (10). Few of these policies can be recommended for all circumstances. Many of them doubtless involve a sacrifice of efficiency for temporary financial retrenchment.

References on Supervision

1. AYER, FRED C., and BARR, A. S. *The Organization of Supervision.* New York: D. Appleton and Co., 1928. Chapters 3-9. See also p. 93.
2. CAMP, FREDERICK S., chairman. *Report of Special Committee on Emergency Finance.* New Haven: Connecticut Association of Public School Superintendents, 1932. Mimeographed, 17 p.
3. GOODYKOONTZ, BESS. "The Integration of the Activities of Various Supervisors Dealing with the Same Groups of Teachers." *Nineteenth Annual Schoolmen's Week Proceedings, March 9-12, 1932.* Philadelphia: University of Pennsylvania Press, 1932. p. 87-92.
4. GOSSETT, J. O. "Interests of Principals and Current Economical Measures in California High Schools." *California Quarterly of Secondary Education* 5: 184-87; January, 1930.
5. GRAHAM, BEN. "Balancing the Budget Through Professional Adjustments." *Nineteenth Annual Schoolmen's Week Proceedings, March 9-12, 1932.* Philadelphia: University of Pennsylvania Press, 1932. p. 7-13. See p. 10.
6. HAGGARD, W. W. "Where Not to Economize in Secondary Education." *Bulletin (Proceedings)* 30: 38-45; March, 1930. Berwyn, Ill.: Department of Secondary-School Principals, National Education Association.
7. HALL, SIDNEY B. "Some Economies in Public School Administration." *Virginia Teacher* 13: 1-4; January, 1932.
8. JENSEN, FRANK A. "Increasing Efficiency and Reducing Cost in the Administration and Supervision of Elementary Schools." *American School Board Journal* 82: 41-42, 129; June, 1931.
9. KERSEY, VIERLING. "The Cost of Cheap Educational Programs." *California Schools* 3: 109-17; April, 1932.
10. KERSEY, VIERLING. "First Things First in Education." *California Schools* 3: 59-80; March, 1932. p. 67-68, 76-77.
11. MCGINNIS, WILLIAM C. *School Administrative and Supervisory Organizations in Cities of 20,000 to 50,000 Population.* Contributions to Education, No. 392. New York: Teachers College, Columbia University, 1929. 103 p. See p. 65-66.
12. MELBY, ERNEST O. *A Critical Study of the Existing Organization and Administration of Supervision.* Bloomington, Ill.: Public School Publishing Co., 1929. 158 p.
13. MILLER, CHESTER F., chairman. *School Economies Through Efficient Administration and Management.* Committee on Public School Economies. Lansing, Mich.: Michigan Education Association, March 26, 1931. Bulletin No. 22. p. 20-23.
14. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS. "The Elementary School Principalship." *Bulletin (Seventh Yearbook)* 7: 132-638; April, 1928. Washington, D. C.: the Association. Chapter 5, "Distribution of the Principal's Time," p. 204-09.
15. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS. "The Principal and Administration." *Bulletin (Ninth Yearbook)* 9: 132-731; April, 1930. Washington, D. C.: the Association. Chapter 4, "The Principal's Time Budget and Work Habits," p. 193-216.
16. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE. "Meeting the Emergency." *News Letter,* Nos. 1-5, January 28, February 13, March 11, April 15, and May 27, 1933. Washington, D. C.: the Association.
17. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE. "The Superintendent Surveys Supervision." *Eighth Yearbook.* Washington, D. C.: the Association, 1930. 472 p. Chapter 4, "Types of Supervisory Organization," p. 49-85, and Chapter 6, "Evidences of the Value of Supervision," p. 98-140.
18. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "The Outlook for Rural Education." *Research Bulletin* 9: 230-301; September, 1931. Washington, D. C.: the Association. p. 295-302.
19. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "The Principal at Work on His Problems." *Research Bulletin* 9: 94-159; March, 1931. Washington, D. C.: the Association. p. 117-27.
20. NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. "The Status of Rural Education." *Thirtieth Yearbook, Part I.* Bloomington, Ill.: Public School Publishing Co., 1931. 272 p.
21. NUTT, HUBERT WILBUR. *Current Problems in the Supervision of Instruction.* New York: Johnson Publishing Co., 1928. Chapter 9, p. 153-57.
22. "Reducing Supervision Costs in the Smaller Cities." *Nation's Schools* 4: 80; September, 1929.
23. REYNOLDS, ANNIE. *Supervision and Rural School Improvement.* U. S. Dept. of the Interior, Office of Education, Bulletin, 1930, No. 31. Washington, D. C.: Government Printing Office, 1930. p. 4-5.
24. ROUDEBUSH, G. E. "Some Practicable Economies in School Administration." *American School Board Journal* 78: 41-42; June, 1929.
25. SCOTT, CECIL W. "Economies in Public-School Expenditures for Instruction." *American School Board Journal* 84: 39-40; 50-51; February, March, 1932.
26. SMITH, NILA BANTON. "The Key-Teacher Scheme of Supervision." *Elementary School Journal* 28: 576-86; April, 1928.
27. STRAYER, GEORGE D., director. *Report of the Survey of the Schools of Chicago, Illinois.* New York: Teachers College, Columbia University, 1932. Vol. 3. p. 113-40.

VII. Economy in the Management of School Supplies

Small but important economies may result from improved methods in the management of school supplies and textbooks, for which 7 to 10 percent of the total budget is required (9, 16). Four possibilities for economy deserve consideration; namely, the selection, purchase, care, and use of supplies and equipment.

Economy in the selection of supplies—To provide the teacher with instructional supplies so limited in amount and poor in quality that she cannot do effective work is obviously false economy (1); but among the questions which should be raised in connection with each proposed item are the following: How important is the function which it serves (7, 13, 16)? Will its purchase increase the effectiveness of school work (7, 16)? How many pupils will use it (7)? How frequently is it needed (7)? Does its purchase mean that a more important item cannot be purchased (7)? Can the district afford it (7)? What is its probable useful life (10)?

Unless those who actually use materials are given a voice in their selection, items may be purchased for which there is little demand. Therefore, it is sound policy to consult teachers and other employees who use equipment and supplies as to the items wanted (9, 10, 11, 17). Establishment of a standard list of items is particularly important (9, 11, 12, 17, 20). One school system reduced the number of different items to be purchased from 1985 to 1790 by this method (9) and reported that in so doing the purchasing department saved the time of seven clerks for ten to twelve days in making up orders, records, and inventories. A uniform list of supplies also saves time in placing orders and simplifies storage.

The quality of any item should be as good as, but no better than is required by its purpose (16, 17, 20). Purchasing agents alert for substitutes that are equally good are able frequently to make important savings (9). Various brands and qualities of merchandise should be used comparatively under controlled conditions (6, 8, 9, 10, 15). Feinstein and West (8) describe a method for determining the relative efficiency of coals which illustrates this recommendation. When quality standards are determined, they should be incorporated into definite specifications in terms of which all purchases can be evaluated (6, 8, 9, 11, 12, 16, 20). The United States Bureau of Standards publishes detailed specifications for several hundred different commodities, many of which are used in schools (21).

Economy in the purchase of equipment and supplies—It is more economical for the superintendent—or in a large city, a skilled school purchasing agent working under his direction—to purchase supplies for the entire school system than for employees individually to purchase needed materials (3, 5, 9, 16, 20).

Cooperative buying by a group of school systems has proved advantageous in many instances (2, 3, 9, 13, 16, 17, 18, 19). Table 6 summarizes results of two of these studies.

Shipley (18) compared prices on 376 purchases and found that as a result of cooperative buying the following savings were made: from 10 percent to 100 percent saving in more than half of the purchases; 100 to 200 percent in one-third of the purchases; 200 to 300 percent in 4 percent of the purchases; 300 to 400 percent in 2 percent of the purchases; and more than 400 percent in 0.26 percent of the purchases. Individual districts secured better prices in only 1.33 percent of the purchases.

Better prices can be obtained by purchasing in relatively large quantities (5, 12, 13, 16, 17). Therefore, it is extremely important that an accurate estimate of supplies needed during the coming year be made before the close of the current year (5, 7, 9, 12, 14, 17, 20). In making that estimate, the quantity used during the current year (7, 12, 16, 17, 20), the enrolment for the coming year (16, 17), and possible economies and omissions (7, 16) should be considered. On the basis of an accurate estimate supplies for an entire school year can be ordered; but the purchase of supplies for more than one year is generally regarded as unwise (17, 20). Other factors to be considered are: amount of storage space available (17), market prices at the time (10, 17), and the proportion of the school budget that is being devoted to this purpose (1, 7, 17). In one study a range in the cost of *instructional supplies* per pupil in average daily attendance from \$0.42 to \$5.44 was discovered (1). Likewise, the cost of *janitorial-engineering supplies* ranged from \$0.17 to \$1.11 per pupil in average daily attendance. The averages were \$2.14 and \$0.38, respectively. The authors suggest, as a "zone of

safety," $1.50 to $2.71 (per pupil in average daily attendance) for instructional supplies, and 30 to 60 cents for janitorial-engineering supplies. Pupil-quotas for standard supplies have been developed (1, 10). If costs vary greatly from these limits, the administration would do well to seek the cause.

Since prices on school supplies are by no means standardized, the purchaser should always compare those of one firm with those of others (3). When purchasing in quantity, reliable firms should be asked to submit bids (9, 16, 17, 20), preferably item-by-item bids (3, 5). One school system saved $160 on glass by asking for bids; another was given a bid 20 percent lower than the firm's catalog prices (9).

A study of school warrants in a single county revealed the following comparisons (3): A standard brand of paper towels had been purchased at eleven different prices ranging from $7.00 to $14.50 per case. Similarly, crayons at seven different prices ranging from $0.60 to $1.20 per dozen boxes, and chalk at six different prices, $0.42 to $0.90 per box. One firm had charged seven different prices for a well-known brand of pencils. These data show the importance of securing bids. However, this method can be used to best advantage only when the supply list is standardized and accompanied by complete and accurate specifications. In comparing prices, shipping charges should not be overlooked (13). Payments should be made promptly in order to take advantage of the discounts offered (9, 13, 16, 17, 20). In this connection, authorities often recommend that purchases be made without direct action on the part of the school board. That is, authorization of the purchase in the budget should authorize payment for the merchandise. The audit supplies the school board with a final check. Direct action on each bill received may prevent effective purchasing (5, 16, 20).

All commodities should be purchased at the season when prices are lowest; for example, coal in summer (5, 9, 12, 17). The data presented by Clark and Fowlkes (4) show that instructional supplies can be purchased to best advantage during the spring months before supply houses receive heavy orders. Another factor to be considered is the time of year when cash is available (16). Unless prices are rising rapidly, it is uneconomical to buy supplies at a time when a short-term loan must be arranged to pay for them.

When possible, supplies should be purchased direct from manufacturers and publishers, or at least from wholesale firms (5, 9, 20). It is good policy to deal only with reliable firms and, provided fair prices are maintained, to deal with the same ones regularly so that orders will receive more careful attention (13). Commodities should be purchased from local firms only when their prices are no higher than those of other firms (9, 16).

TABLE 6.—COMPARATIVE PRICES UNDER INDIVIDUAL AND COOPERATIVE PURCHASING AS REPORTED BY TWO STUDIES

Articles Bought	Prices as Reported by			
	Atkinson (2)		Calif. Dept. of Ed. (19)	
	Cooperative buying	Individual district buying	Cooperative buying	Individual district buying
1	2	3	4	5
Scratch paper, per lb.	$0.04	$0.08–0.10	$0.05	$0.19
Foolscap #12, per ream (half sheets)	0.62	1.25	.....	.....
Pencils, per gross	2.40	5.40	.....	.....
Ink, per quart	0.50	1.25	0.60	1.50
Pens, per gross	0.45	1.25	0.50	1.50
Athletic goods	40% dis.	list price	.....	.....
Paste, per pint	.....	.....	0.45	1.00
Drawing paper, per ream	.....	.....	0.63	3.25
Blotters, per gross	.....	.....	0.27	1.00

Economy in the care of supplies—The most economical and efficient point for f. o. b. shipment depends on school transportation facilities, location of storehouse and manufacturer (10). Losses can be avoided only by inspecting and checking carefully all merchandise received against the specified requirements and by keeping accurate records of all receipts (7, 9, 16, 17, 20). Although a single order for the year's supplies is properly given, deliveries may be scheduled at various intervals throughout the year (10). The labor involved in receiving and caring for supplies is thereby reduced and spread more evenly, less storage space is required, and at any one time, a smaller cash investment is withdrawn from an interest-bearing account (10).

Orderly arrangement in a storeroom that is clean and safe is the first essential (9, 13, 16, 17, 20). Whether supplies should be kept in a central storeroom from which they are delivered at regular intervals or stored at each building in the school system depends on local circumstances. The Committee on Supply Research concluded that the central storehouse is desirable in a system of over 10,000 population (10). The central storeroom makes it possible to operate on a somewhat smaller invoice, for there is a pooled surplus instead of the many small margins (16). There should be a system of continuous accounting (5, 16, 20), and periodic invoices of both supplies and equipment (16). Records of all losses should be required as an incentive to the careful preservation of materials (16).

The distribution of supplies from the central storeroom on schedule rather than on call saves labor (16, 20). All deliveries should be carefully entered on suitable record forms (7, 16, 20). Distribution within each school should be handled by a clerk, janitor, or other responsible adult.

Prompt attention to minor repairs often increases the useful life of books and equipment, thereby effecting substantial economies (9). One school rebinds books in the Industrial Arts Department at a cost of only five cents a book (9). Another has them repaired and rebound by a paid employee at an estimated cost of 26.8 cents per volume (22). All good parts of discarded equipment and supplies should be salvaged and stored in an orderly manner (9). If employees know that supplies and equipment are likely to be inspected at any time, they tend to store and maintain materials more carefully (20). A periodical inspection of the classrooms and individual storage rooms will show whether the materials are being properly and economically used (10).

Economy in the use of supplies—When requisitions originate with the user but must be approved by the building principal, a definite line of responsibility is established by means of which economical use of materials can be accomplished (16, 20). The cooperation of employees is necessary if any significant economy in the use of supplies is to be achieved (9, 13, 17). Not only must they be willing to cooperate personally, but they must be able to secure the cooperation of pupils and to supervise them in their use of materials (7, 9, 13, 16). The oldest materials should be used first in order to avoid losses through deterioration or obsolescence (17). There should be standard quantities for essential supplies based on accurate cumulative records and continuous comparisons (9, 10, 15, 16, 17, 20).

References on Management of School Supplies

1. Anderson, C. J.; Fowlkes, John Guy; and Jones, L. F. *Study of Budgeting and Allotment of School Supplies.* National School Supply Association, 1929. 43 p.
2. Atkinson, Carroll. "The County Superintendent as a School Supply Distributor." *School Executives Magazine* 50: 413-14; May, 1931.
3. Buckalew, Harry L. "The Purchase of School Supplies." *American School Board Journal* 75: 66-67; July, 1927.
4. Clark, Harold F., and Fowlkes, John Guy. "Index Numbers for School Supply Prices." *Nation's Schools* 2: 46-48; September, 1928.
5. Conrad, C. W. "School Supply Management." *School Executives Magazine* 50: 416-17; May, 1931.
6. Demary, R. C. "Purchasing Coal for Schools." *American School Board Journal* 79: 45-46; August, 1929.
7. Douglass, Harl R. *Organization and Administration of Secondary Schools.* Boston: Ginn and Co., 1932. p. 441-51.
8. Feinstein, H. L., and West, J. C. "A Simple Method for Determining the Relative Efficiency of Coals." *American School Board Journal* 83: 34; November, 1931.
9. Henzlik, F. E.; Richards, W. M.; Ireland, C. J.; and others. *Practical Economies in School Administration.* Lincoln: University of Nebraska, Extension Division, March, 1932. p. 27-59; 173-77. (Educational Monographs No. 3.)

10. HIBBERT, R. W., chairman. *Selection, Purchase, Storage, and Distribution of Supplies.* Bulletin No. 1, Committee on Supply Research. Trenton, N. J.: National Association of Public School Business Officials, 1932. 58 p.
11. HIBBERT, RUSSELL W. *The Why and How of a Semi-Standard Supply List.* Proceedings of the National Association of Public School Business Officials, 1931. p. 55-67.
12. KELTY, C. V. "Buying School Supplies." *American School Board Journal* 81: 43-44; July, 1930.
13. KNOX, ROSE B. *School Activities and Equipment.* Boston: Houghton Mifflin Co., 1927. p. 312-39.
14. LOOMIS, ARTHUR KIRKWOOD. *A Technique of Estimating School Equipment Costs.* Contributions to Education, No. 208. New York: Teachers College, Columbia University, 1926. 112 p.
15. LOVEJOY, PHILIP C. "Saving Money in the Supply Budget." *Nation's Schools* 7: 84, 86, 88; June, 1931.
16. MORRISON, HENRY C. *The Management of the School Money.* Chicago: University of Chicago Press, 1932. Chapter 17. p. 360-90.
17. REEDER, WARD G. *The Fundamentals of Public School Administration.* New York: Macmillan Co., 1930. p. 280-300.
18. SHIPLEY, A. H. "A Comparison of Prices Paid by Central Purchasing and Individual District Buying for School Supplies." *American School Board Journal* 79: 50, 142, 144; July, 1929.
19. STATE DEPARTMENT OF EDUCATION, CALIFORNIA. *Thirty-Second Biennial Report of the Superintendent of Public Instruction, for the School Years Ending June 30, 1925 and June 30, 1926.* Sacramento: the Department, 1927. p. 29-31.
20. TAYLOR, ROBERT B. *Principles of School Supply Management.* Contributions to Education, No. 228. New York: Teachers College, Columbia University, 1926. 145 p.
21. U. S. DEPARTMENT OF COMMERCE, BUREAU OF STANDARDS. *Alphabetical Index and Numerical List of United States Government Master Specifications, Promulgated by the Federal Specifications Board.* Circular No. 319. Washington, D. C.: Government Printing Office, 1928. 18 p.
22. WELLS, D. N. "How Pueblo Schools Reduce School-Book Costs Through a Book-Repair Department." *American School Board Journal* 77: 46, 154; July, 1928.

See also references 6, 8, 11, 13, 16, and 18 in the section on "The Budget As an Instrument for Economy." p. 66-69.

THERE is no disposition on the part of those engaged in education to be callous or indifferent to the demands for relief from excessive tax burdens. The schools, more than any other agency of government, have reduced expenditures to meet demands of reduced incomes. But there is a point beyond which reductions cannot be made without permanent damage to the institution which has contributed most significantly to the state and national welfare.

The future welfare of our democratic social order is dependent upon the efficiency of our public schools. Drastic reductions in educational services are dangerous to public welfare. Social, civic, and economic problems which are proving baffling to the present adult generation are becoming increasingly complex and promise to present new difficulties to the youth of today who will soon be charged with their solution as adults. The only reasonable hope that today's youth will be able to cope successfully with these problems lies in an effective program of education.

While reasonable retrenchments in school expenditures are necessary to meet current economic conditions, the efficiency of the school system must not be entirely subordinated to financial considerations.—Helen Heffernan and Ivan R. Waterman. *Maintaining Educational Efficiency During Emergency,* California Department of Education Bulletin, p. 16.

VIII. Economy in the School Insurance Program

Opportunities for economy appear in the organization of the school insurance program. Surveys of existing programs indicate possibilities in reduction of premiums and redistribution of coverage. The insurance now written applies to losses from fire, tornado or windstorm, burglary, or theft; boiler, automobile, and sprinkler leakage; workmen's compensation, liability, or elevator insurance. The Committee on Insurance Research has assembled data on the insurance practices and experience of 380 city school districts (21). Its report, referred to in succeeding pages, suggests many means of savings. Reeder and Holmstedt (19) have surveyed various methods of economy in maintaining fire insurance for school property. Since most of the available information on school insurance programs relates to school fire insurance, this topic receives the chief emphasis in this chapter.

Elimination of hazards—It is often possible to reduce the cost of fire insurance by removing fire hazards. The cost of removing such hazards often amounts to less than the annual saving on insurance premiums. Heating apparatus, storage vaults, flues and chimneys, electrical wiring, electric machines, ash heaps, and rubbish heaps should be subjected to careful study, primarily because of added safety to the children, but also as a means of lowering the insurance premiums (5, 6, 12, 17, 21, 24, 25, 26).

Installing protection—The presence of a regularly organized local fire department lowers premiums required for fire insurance (5, 17). Rates can often be lowered by installing the ordinary type of small chemical fire extinguisher. These should always be on hand in laboratories, furnace rooms, kitchens, and the other places where fire is used. Automatic sprinkler systems may also be effective in reducing both hazards and premiums (3). The secretary of one school district cut $1,000 per year from insurance costs by correcting hazards about the schools (21).

State insurance—Smith found that three states—South Carolina, Wisconsin, and North Dakota—have established funds and provide for the insurance of public school buildings against loss by fire (25). After a study of results in these states, Smith concluded that their experience indicated that "state fire insurance would result in material saving over the present method of insurance." Beyer's article, however, questions this recommendation (2). In North Dakota the rates paid to the state are approximately 75 percent of company rates. In Wisconsin, current rates are approximately 49 percent of company rates (9). The Association of School Board Secretaries in Pennsylvania suggested that some state insurance plan, similar to the self-insurance plan adopted in Philadelphia, be tried for school districts throughout the state. During one year, 184 districts spent $278,691 on insurance premiums; the fire losses for that period had amounted to $49,447, or less than 20 percent of the premiums paid (7).

Self-insurance—The 49 city school districts that in 1931 had insured their public-school properties represent a total population of 22,916,937, and school properties valued at $1,274,729,897. Survey reports from additional cities indicate that funds are now being accumulated in order that a plan of self-insurance may be put into effect later (21). Provided that funds are properly managed, savings should accrue through self-insurance in any large city having a large number of school buildings well scattered throughout the city, and without fire hazards (17, 18, 24, 25). This is apparent from a consideration of the ratio of fire losses to premium costs. In Pennsylvania approximately twenty cents was paid back as insurance for every dollar paid toward fire protection by 627 school districts during 1922-27 (11). The payments returned during 1921-30 on account of fire losses in 42 cities and villages of New York, averaged 12.7 cents for each dollar paid in premiums (21). During 1931 Ohio school districts paid $465,077 in premiums and received $47,386 on account of fire losses (9). In 1932 rural districts and incorporated villages having a population of less than 5,000 paid $239,884 in premiums and reported fire losses amounting to $31,795 (10). The Committee on Insurance Research made a state by state survey of insurance coverage for school properties. Premiums paid for fire protection on some 9,213 school buildings during 1921-30 totaled $14,045,839; fire losses paid during this period amounted to $4,171,041, or 29.7 percent of the premiums paid (21).

Writing five-year policies—Since the rate of insurance for five years is usually only four times the rate for a single year, it is obviously economical to buy policies running for a five-year term. The policies can be spread out so that all do not fall due in a single year and so that approximately equal annual appropriations for insurance purposes may be made (12, 25).

Adequate appraisals—In a study of school insurance in eight New Jersey cities, Smith found that five of the eight had no reliable appraisal of the value of the school property (25). Brunstetter found expert appraisals in three out of nine New Jersey cities (4). Skaaland found that less than six percent of Minnesota school districts had adequate property appraisal (23), and Melchior found a corresponding figure in New York state of only three percent (12). Obviously, an accurate knowledge of the value of property is a prerequisite for a business-like plan of insurance (25). Smith has compiled the opinions of nine insurance experts as to the best method of appraising school property (24). Sometimes state insurance officials can assist in getting accurate appraisals made for local school districts (20).

Mutual insurance—While city school systems have not taken out fire insurance with mutual companies to any extent, the Committee on Insurance Research found that the reports from school districts using this protection were favorable. The Committee pointed out that mutual insurance protection is furnished at a cost averaging less than in the case of insurance with stock companies. The mutual companies showed more favorable loss and expense ratios than the stock companies. At least thirty-nine mutual companies write non-assessable contracts, and many other companies have never had occasion to levy assessments in addition to regular premium payments (21).

Estimated and actual economies—Estimates and reports from different states and local communities show that annual amounts from below $100 to over $300,000 were saved through eliminating hazards, installing fire protection, eliminating unnecessary coverage, writing 5-year policies, securing proper appraisal, or insuring through a state fund. Table 7 shows these estimated or reported savings.

Other property insurance—While school districts do not uniformly favor tornado and windstorm insurance, the Committee on Insurance Research suggested the desirability of such protection in sections of the country subject to such storms. No special recommendations appear in the Committee's report, concerning economical methods of organizing the various forms of property insurance other than fire. Only limited losses had occurred from

TABLE 7.—ESTIMATED AND ACTUAL ECONOMIES IN SCHOOL FIRE INSURANCE

Type of Economy	Savings Estimated or Reported in:																
	New Jersey (25)								Penna. (27)	Mich. (13)		Kans. (20)	S. C. (22)	N. Y. (1)	N. D. (16)	Alabama (16)	Iowa (21)
	City A	City B	City C	City D	City E	City F	City G	City H	Coraopolis	City D	City E	Manhattan	(State)	Oyster Bay	(State)	Rural Districts	Sioux City
Eliminating hazards	$226	....	....	....	$260	$376	....	$75	.....	No est.	.....	$170	.....	$643	.....	.....	.....
Installing fire protection	....	$340	$291	$531	200	160	....	....	.....	No est.	.....	.....	.....	238	.....	.....	$100
Eliminating unnecessary coverage	....	354	....	1066	100	....	....	....	.....	No est.	$1848	.....	.....	No est.	.....	.....	.....
Writing 5-year policies	....	....	....	909	....	....	$135	....	$82	.....	.....	.....	.....	136	.....	.....	.....
Proper appraisal	....	No est.	No est.	No est.	....	No est.	No est.	No est.	No est.	$1154	.....	.....	.....	.....	.....	.....	.....
State insurance	....	....	....	....	....	....	....	....	.....	.....	.....	.....	$200,000[1]	.....	$340,000[1]	$250,000[1]	.....

[1] An adversely critical analysis of these estimates has been published by Beyer (2).

boiler explosions; only one district reported any substantial loss from sprinkler leakage. No school districts reported that they had established sinking funds for protection against automobile losses. Several districts carrying burglary or theft insurance limit this coverage to school vaults, safes, and principals' offices (21).

References on the Insurance Program

1. BEACH, FRED F. "Saving Thirty Per Cent on Insurance." *American School Board Journal* 82: 59; June, 1931.
2. BEYER, WALTER F. "The Practicability of State Insurance Funds." *American School Board Journal* 83: 48, 116, 119; September, 1931.
3. BLISS, VINCENT R. "Recent Measures That Have Lowered the Cost of Fire Protection." *Nation's Schools* 6: 73-75; August, 1930.
4. BRUNSTETTER, M. R. *Business Management in School Systems of Different Sizes.* Contributions to Education, No. 455. New York: Teachers College, Columbia University, 1931. p. 45-52.
5. ENGELHARDT, N. L. and ENGELHARDT, FRED. *Public School Business Administration.* New York: Teachers College, Columbia University, 1927. p. 386-406.
6. "Fire Insurance and Fire Prevention." *American School Board Journal* 74: 136, 139; April, 1927.
7. "Fire Insurance for School Property." *American School Board Journal* 70: 101-02; April, 1925.
8. HENZLIK, F. E.; RICHARDS, W. M.; IRELAND, CLIFFORD J.; and others. *Practical Economies in School Administration.* Lincoln: University of Nebraska, Extension Division, March, 1932. p. 127-33. (Educational Monographs No. 3).
9. HOLY, T. C., compiler. *Comparison of School Plant Insurance Premiums and Reported School Fire Losses in Ohio Cities and Counties for 1930 and 1931.* Columbus, Ohio: Bureau of Educational Research, April, 1933. Mimeographed, 9 p.
10. HOLY, T. C., compiler. *Information on School Plant Insurance in Ohio.* Columbus, Ohio: Bureau of Educational Research, May, 1933. Mimeographed, 10 p.
11. KEITH, JOHN A. H., and TAGGART, MATTHEW H. *Study of the Economical Insurance of School Property.* Harrisburg, Pa.: Commonwealth of Pennsylvania, January, 1, 1929. 12 p.
12. MELCHIOR, WILLIAM T. *Insuring Public School Property.* Contributions to Education, No. 168. New York: Teachers College, Columbia University, 1925. 187 p.
13. MILLER, CHESTER F., chairman. *School Economies Through Efficient Administration and Mangaement.* Committee on Public School Economies. Lansing, Mich.: Michigan Education Association, March, 1931. Bulletin No. 22, p. 12-15.
14. MORTON, W. H. "School Property Insurance." *School Executives' Magazine* 51: 305-06; March, 1932.
15. OLIVER, STANLEY C. "Some Social and Economic Aspects of School Fires and Fire Insurance." *American School and University, 1929-30.* New York: American School Publishing Corporation, 1929. p. 156-62.
16. PLATTS, P. K. "Does State Insurance on School Property Pay?" *American School Board Journal* 83: 59; July, 1931.
17. REEDER, WARD G. *The Business Administration of a School System.* Boston: Ginn and Co., 1929. Chapter 14, p. 287-318.
18. REEDER, WARD G. "Community Insurance of School Buildings." *Educational Research Bulletin* 4: 161-63; April 15, 1925.
19. REEDER, WARD G., and HOLMSTEDT, R. W. "Financial Economies in Business Management of Schools." *Review of Educational Research* 2: 139-47; April, 1932. Washington, D. C.: American Educational Research Association, a department of the National Education Association. See p. 141-43.
20. "Rewriting School Property Insurance at Manhattan, Kansas." *American School Board Journal* 76: 172; June, 1928.
21. ROBERTS, H. C., chairman. *Insurance Practices and Experience of City School Districts of the United States and Canada.* Bulletin No. 2. Committee on Insurance Research. Trenton, N. J.: National Association of Public School Business Officials, 1932. 230 p.
22. SHERARD, J. L. "Free Insurance for School Buildings." *American School Board Journal* 73: 40; November, 1926.
23. SKAALAND, S. G. "Public-School Property Insurance." *American School Board Journal* 75: 41-42; October, 1927. Summary of Master's thesis, University of Minnesota, 1926, entitled: *An Analysis of the Practices and Procedures Followed in Insuring School Property in Minnesota.*
24. SMITH, HARRY P. *Business Administration of Public Schools.* Yonkers-on-Hudson, New York: World Book Co., 1929. Chapter 11, p. 245-66.
25. SMITH, HARVEY A. *Economy in Public School Fire Insurance.* Contributions to Education, No. 428. New York: Teachers College, Columbia University, 1930. 113 p.
26. TRAUTSCHOLD, REGINALD. "School and College Building Fire Losses." *American School Board Journal* 71: 108; August, 1925.
27. WERNER, J. C. "Economy and Equalization in Insurance Expenditures." *American School Board Journal* 81: 44; November, 1930.

Additional bibliography is available in references 5, 12, 17, 19, 24, 25.

IX. The Management and Protection of School Funds

Greater efficiency in the management of school revenue results in important economies in many school systems. Opportunities for economy are often found in dealing with one or all of the following problems: (1) collecting and managing the available revenue, (2) obtaining the optimum amount of interest on deposited funds, and (3) protecting school funds against loss.

Collecting and managing the revenue—Funds that the school district is entitled to receive are not always turned over to it automatically. District authorities should be alert to prevent losses in revenue because of undervaluated property; property not on the tax roll; uncollected state and federal aid; undistributed license fees, fines, delinquent taxes, and interest on money; and uncollected tuition fees, breakage fees, receipts from the sale of supplies, profits from non-academic school activities and enterprises, rentals, and receipts from the sale of miscellaneous property and equipment (8). When school funds are collected by an officer of the local government, they should be obtained from him regularly and as frequently as the law permits so they may earn interest for the school district (8).

Because taxes are ordinarily collected annually, or at most semi-annually, obligations of the school district frequently fall due at a time when revenue is not in hand. In that event the district is forced to adopt one of three plans: (1) it may carry a reserve large enough to anticipate expenditures, (2) it may resort to short-term loans, or (3) it may defer the payment of its obligations. None of these plans is desirable. The shorter the interval between the time when funds are collected and the time when expenditures are made the more economical it is to the taxpayer. Several years ago investigators in the state of New York (18) estimated that the following annual loans could be traced directly to the fact that taxes were paid in September for a fiscal year beginning the previous January 1:

City	*Amount borrowed annually which was attributed to this factor*
New York	$3,000,000
Syracuse	50,000
Utica	20,000

By advancing the date of tax collections, the city of Troy saved $42,000 a year (18). Young (20) found that the interval between the beginning of the fiscal year and the date of tax collections ranged from 0 to 220 days in the New York cities which he studied. In eight cities and four villages short-term loans of $5,000 to $1,750,000 could be attributed to the span between the beginning of the fiscal school year and the tax year. In many instances, delay in the payment of bills resulted in the loss of cash discounts. Better coordination between the fiscal year and tax year can sometimes be effected;[1] if not, arrangements should be made whenever possible to have bills fall due when revenue is in hand.

Authorities on school administration are generally agreed that borrowing money habitually for current operating expenses is an undesirable practice. Yet because of the situation described above, and for other reasons, the practice continues. Halsey (7) found that thirty-one of fifty-one counties in Florida were borrowing from $100 to $500,000 annually at interest rates ranging from three to eight percent. One district had arranged a twenty-five year loan at eight percent. Without compounding the interest, this loan would cost the district more than three times the amount borrowed. The average interest payment on short-term loans in the fifty-one counties studied was more than $5,000 per year.

Agencies of the local government are sometimes authorized by law to exercise control over school revenue. A decade ago Frasier (6) ranked 169 cities on an index of efficiency. Little more than one-fourth of the fiscally dependent cities exceeded the median rank of the independent cities. A negative correlation (—.27) was found between dependence and efficiency. These conclusions find support in the studies of McGaughy (13) and Young (20). The former found that the per capita bonded indebtedness was higher in dependent cities and that taxable property was assessed at a higher percentage of its real valuation. Young found that school boards were frequently inconvenienced in dealing with important affairs because of long delays on the part of city councils. As much as 138 days elapsed between the time the budget was submitted and the time of its approval. In spite of the clear cut evidence that

[1] Change in the fiscal year may require a change in school law, but, with an important economy at stake, even this task cannot well be ignored.

independent school districts manage their affairs efficiently and economically, school districts have by no means been released from the control of governmental agencies. For example, sixty cities in the state of New York are classified as follows (20):

Dependent cities	11
Partially dependent cities	16
Budget approved by vote of people	10
Independent cities	23

Two very different plans are followed in the collection of school taxes: (1) collection of school taxes along with others by the regular tax official of the city or county, and (2) the separate collection of school taxes by an employee of the school district. The former method is the more economical (20). For example, in Pennsylvania in 1926, fourth class districts paid $973,552 and third class districts $732,348 for the separate collection of their taxes. It was estimated that regular officials could have collected them for not more than $100,000—a possible saving of about one and one-half million dollars (1). The first method is not without its abuses, however, for school districts are often required to pay excessive fees into the treasury of the local government for this service; for example, one percent during the first month of collection and five percent thereafter (20). Such an arrangement in one county meant that the cost to the school districts was $250,000 (8).

Obtaining optimum interest on deposits—Linn (11) estimates that the combined deposits of school districts in the United States throughout the year would be at least $500,000,000. Hence an increase of one percent in interest rate would add $5,000,000 to school revenues. Nor is such an increase an unreasonable objective. Halsey (7) found that eight Florida counties received no interest at all on school deposits although four of these counties were carrying time deposits. In thirty-one other counties the banks were paying only two percent on daily balances. Young (20) found that in twenty-four of forty-three cities all interest earned by school funds went into the city treasury instead of into the school fund.[1] Replies to a recent inquiry from thirty-eight cities of more than 150,000 population revealed two in which the board was receiving less than one percent; nine in which the rate was lower than two percent; ten in which it was between two and three percent; and only one in which it was four percent[2] (14). Another study (5) reported that sixty-one out of seventy-five banks paid no interest on daily balances.

Ordinarily the board may exercise discretion in choosing depositories for school funds and, since banks are interested in any deposit as large as that of a school district, higher rates of interest may sometimes be obtained by asking for bids (8, 10, 11, 20). The mere arousal of public opinion may be sufficient to obtain a fair rate (20). Linn commends the North Dakota law (10, 11) which fixes both a minimum and maximum rate for daily balances (1½ and 3 percent) and a minimum and maximum rate for time deposits (3½ and 5 percent). Larger use of time deposits, carrying small balances in the operating account, would result in larger interest returns in many districts (11, 20).

Protecting school funds against loss—After all available sums have been collected, their protection from loss is a matter of first importance. Linn (10) lists twenty-four causes of loss in revenue, twenty of which were losses from cash in hand: (1) failure to receive moneys definitely appropriated, (2) failure to collect various sums available locally, (3) bank failures, (4) improper bonding of officials, (5) lack of proper accounting procedures, (6) lack of prompt and proper audits, (7) depreciation of securities, (8) transfer of funds from proper accounts, (9) improper letting of contracts, (10) failure to collect interest on securities and deposits, (11) extravagance, (12) waste, (13) insufficient legislation, (14) general mismanagement, (15) graft and fraud, (16) embezzlement, (17) theft, (18) forgery, (19) absconding of school fund officials, (20) padding payrolls and bills, (21) manipulating accounts, (22) improper sale of bonds and securities, (23) diversion of interest moneys, and (24) improper investment of funds. The findings of Fleetwood and Richardson (5) in

[1] In some instances, interest moneys go into the treasury of the local government because the law provides that they shall. When that is true, the school board cannot secure this revenue until the law is modified. In other instances, the law is indefinite and the practice has simply arisen. In the absence of specific legal regulation, the courts have favored school districts and allowed them to recover interest on school funds (20).

[2] Seven of the replies were blank with respect to this item and one asking for the basis of calculation used in computing interest. This may, or may not, mean that the school district is getting *no* interest on its deposits. Six other replies were indefinite; for example, "agreement between city and bank."

their study of seventy-eight school districts in Missouri show that many school districts leave their funds unprotected. They found that:

1. More than one-third of the districts were without a bonded treasurer.
2. More than half the bonded treasurers gave personal bonds.
3. Not more than thirteen depositories had been designated in compliance with the law.
4. Four-fifths of the depositories were not bonded.

Replies to a recent inquiry from thirty-eight cities over 150,000 in population gave additional evidence of the need for better protection (14). Of the thirty-four cities giving definite information on this point, eight cities reported that their funds were unprotected. Protection in the twenty-six remaining cities varied from "bonded officials" to "bonded officials: surety bond and collateral security given by bank."

Officials charged with the custody and management of public funds are commonly required to furnish bond. The minimum of protection for public money provided by this method should never be neglected. Linn (10) points out that requiring a bond does not question the official's honesty; it protects him and the public against inefficient subordinates, robbery, and all unavoidable losses and does decrease the temptation to misuse funds. As a result of his study of the problem Linn (10) makes the following recommendations:

1. Require a bond of all officials who handle funds, such as, tax collectors, treasurers, board members who handle funds, business officials, auditors, clerks, cafeteria managers, storeroom keepers, and custodians of special funds.
2. Determine the amount of the bond in terms of (a) the total sum handled, (b) the amount handled at any one time, (c) accounting and auditing procedures followed, (d) extent to which others share the responsibility with the official in question.
3. Require corporate (not personal) bonds.
4. Pay bond premiums with public funds.
5. Beware of clauses written into bonds to limit the liability of the company.
6. Accept and approve bonds promptly and in the proper manner.
7. Have bonds properly recorded and safely preserved.
8. Cover special funds with special bonds.

Large sums of money have doubtless been lost in bank failures, particularly since 1930. Incomplete data from Nebraska in 1928 showed that about two and one-half million dollars were then involved in bank failures (8). The percent recovered is unknown, but the loss was undoubtedly serious. Such losses can be averted in two ways: (1) by the careful selection of depositories, and (2) by requiring the bank to give a surety bond or collateral sufficient to cover the amount deposited.

The following items are among the important ones used by surety companies in determining the strength of a bank:

1. Paid in (not merely authorized) capital—at least $25,000.
2. Surplus and undivided profits—at least twenty percent of the capital; should show a tendency to increase.
3. Deposits—at least $100,000 in any commercial bank.
4. Public deposit ratio—public funds on deposit should not exceed twenty-five percent of the total deposits nor fifty percent of the combined capital and surplus.
5. Ratio of deposits to capital funds (Numbers 1 and 2, above)—not more than 10 to 1; preferably, not more than 4 to 1.
6. Bills payable and rediscounts not more than fifty percent of capital and surplus nor more than fifteen percent of its loans and discounts.
7. Loans and discounts—diversified and not in excess of deposits.
8. Bonds and securities—substantial part of the bank's resources should be invested in bonds and securities that are readily marketable.
9. Fixed assets—not in excess of fifty percent of capital funds.
10. Reserves—not less than fifteen percent of deposits.

Not only should care be used in selecting a depository, but the bank should be required to furnish a surety bond, collateral, or both, sufficient to cover all deposits of the school district (5, 8, 10, 16). Bonds, notes, and all important financial documents should be preserved in safety deposit boxes which can be opened only by the use of two keys (8, 10). In that way they are protected from fire and burglars and no one individual has access to them.

Desirable office practices, adequate and accurate records, and frequent audits of all accounts are essential in the correct management of public funds (8, 10, 12). Among others, the following business methods are important (8, 10): (1) keep little cash on hand, (2) make all payments by checks which must be signed by two individuals, (3) use safety paper for checks and a check protector, (4) use waterproof ink on important documents, and (5)

make no one employee solely responsible for both receiving and paying out money. Publicity with respect to financial matters is an effective control (10). Similarly, the monthly statement, showing how the budget is being followed, is an incentive to economy (9). Accounts should be audited by competent persons, preferably by certified public accountants (8, 10).

Legal provisions with respect to school finance are far from uniform and the laws in many states carry provisions that are contrary to widely accepted principles (10, 11, 15, 19). Of course, school authorities should work for better legislation, but in the meantime, knowledge of existing laws and careful conformity to them should protect the school district from needless litigation (19).

References on Management and Protection of School Funds

1. "The Cost of School Tax Collection in Pennsylvania." *School and Society* 23: 775; June 19, 1926.
2. DEWEY, CHARLES S. "The Deposits of Public Moneys." *American Bankers Association Journal* 18: 129-30; September, 1925.
3. ECONOMIC POLICY COMMISSION. "The Causes of Bank Failures and Some Suggested Remedies." *American Bankers Association Journal* 20: 304-08; November, 1927.
4. FEDERAL RESERVE BOARD. *Eighteenth Annual Report Covering Operations for the Year 1931.* Washington, D. C.: Government Printing Office, 1932. 316 p.
5. FLEETWOOD, H. L., and RICHARDSON, G. D. "Safeguarding Local School Funds in Missouri." *School and Community* 18: 252-54; September, 1932.
6. FRASIER, GEORGE W. *The Control of City School Finances.* Milwaukee: Bruce Publishing Co., 1922. 132 p.
7. HALSEY, HENRY ROWLAND. *Borrowing Money for the Public Schools.* Contributions to Education, No. 368. New York: Teachers College, Columbia University, 1929. 127 p.
8. HENZLIK, F. E.; RICHARDS, W. M.; IRELAND, CLIFFORD J.; and others. *Practical Economies in School Administration.* Lincoln: University of Nebraska, Extension Division, March, 1932. p. 19-27. (Educational Monographs, No. 3.)
9. LEAVENWORTH, P. E. "Financial Statements as a Means of Control." *American School Board Journal* 78: 43-44; March, 1929.
10. LINN, H. H. *Safeguarding School Funds.* Contributions to Education, No. 387. New York: Teachers College, Columbia University, 1929. 187 p.
11. LINN, H. H. "What Interest Shall School Deposits Bring?" *American School Board Journal* 80: 51-52; February, 1930.
12. LOVEJOY, PHILIP. "Administering Revenue Funds Other Than Taxes." *Nation's Schools* 5: 81-82, 84, 61-64; February, March, 1930.
13. MCGAUGHY, J. R. *The Fiscal Administration of City School Systems.* Report of the Educational Finance Inquiry Commission, Vol. 5. New York: Macmillan Co., 1924. 95 p.
14. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE AND RESEARCH DIVISION. *School Funds on Deposit: Protection and Interest Rates.* Educational Research Service, Circular No. 8, 1932. Washington, D. C.: the Association, June, 1932. 7 p.
15. PATTY, W. W. "Legal Provisions for Custody of, and Liability for, Public Funds for Secondary School Support." *American School Board Journal* 72: 47-48, 144; 73: 130, 132; March, April, 1926.
16. QUENELLE, BERTRAM P. "How To Protect School Funds." *School Executives Magazine* 51: 302-05; March, 1932.
17. ROGERS, G. A. "Why Lose Money on Public Funds in Banks?" *American Bankers Association Journal* 18: 606, 644; March, 1926.
18. SPECIAL JOINT COMMITTEE ON TAXATION AND RETRENCHMENT OF THE NEW YORK STATE LEGISLATURE. *Legislative Document, No. 80.* Albany, N. Y.: J. B. Lyon and Co., 1920. p. 19-20.
19. YAKEL, RALPH. *The Legal Control of the Administration of Public School Expenditures.* Contributions to Education, No. 388. New York: Teachers College, Columbia University, 1929. 167 p.
20. YOUNG, DALE S. *Control of Available Public School Income.* Contributions to Education, No. 305. New York: Teachers College, Columbia University, 1928. 110 p.

THE SCHOOLS belong to the people. Society has established public schools to meet certain clearly defined needs. Reductions in educational expenditures are not a matter of concern to school people alone. The public must bear the ultimate responsibility if any community determines to set aside competent professional advice and reduce the amount of school resources below the level of safety. There are two decisions to be made: First, what total sum shall be allotted for educational purposes? The final responsibility for this decision rests with the entire community. Second, what is the most advantageous distribution of the amount provided for schools by public decision? This second decision, as has already been pointed out, should be vested in the professional staff of the schools, reporting to the board of education.—David E. Weglein, chairman. *Report of the Committee on School Costs,* p. 16-17.

X. Teachers' Salaries and Teacher Load

A heavy portion of the current reductions in school budgets is being borne by the teachers. Emergency increases in size of class, heavier teaching loads, and lowered salaries have been common (13, 15).

Teachers' salaries—A joint national committee of educators and laymen recently made this recommendation (23):

> There is one irreducible minimum for effective education. This one basic requirement is good teaching. Such service can be expected only from men and women of broad training and high personal qualities. Such people are everywhere and always in demand. If the schools cannot compete with other agencies to secure this type of teacher, the most important single element of educational efficiency is lost. Retrenchment in teachers' salaries tends ultimately to retain the poorest teachers and to drive the best teachers into other careers.

It is sometimes stated that teachers' salaries should be reduced in proportion to the reduction in the cost of living. If this statement is accepted, it should be remembered that the figures published by the U. S. Bureau of Labor Statistics on living costs are based on the cost of living for laborers and are not reliable measures for the equitable adjustment of the salaries of teachers or other professional workers (2, 6, 10).

A controlling purpose of the measures now being taken by the National Recovery Administration to improve economic conditions is the increasing of salaries and wages. Yet during 1933-34 there will be many teachers receiving salaries below the minima fixed by the President's Reemployment Agreement. Students of contemporary conditions point out the wisdom of reducing the number of persons employed in the directly productive material industries and increasing employment in such social services as education. There are many competent but unemployed teachers who might be used in the public schools to advantage. Effective participation in the recovery program by public schools requires that no further reductions in salaries be made, that salaries of employees below the code minima be at once increased, that the salaries of teachers be quickly restored to more normal levels, and that additional teaching service be used wherever desirable for the welfare of the schools.

Class size and teacher load—The studies of Stevenson (20), Hudelson (7), Smith (19), and others (3, 5, 25) have shown that the achievement of students on standardized subject matter tests does not vary significantly with size of class. If the routine learning of such facts and dexterities—names, dates, numbers, definitions, and the like—is the sole, or even the basic, aim of education, the size of class probably is a matter of no great importance. If, however, education is expected to take as its major responsibility the development of personality and character, the scores registered on standard tests tell only part of the story (1). Most educators, therefore, favor at least some small groups permitting close and friendly contact between teachers and pupils. Where larger classes are formed because of economic pressure on public school budgets, all possible adjustments should be made to compensate for the additional load carried by the teachers in order that harmful results to teachers and pupils may be avoided. A list of such adjustments is presented by Lewis (8). In a survey of opinion Scott found that, if classes must be enlarged, the increasing of class sizes only at certain levels and in certain subjects is more generally favored than the establishment of a standard class for the entire school system (18). Sometimes it is desirable to readjust schedules and classes so that the average teaching load remains approximately constant, while inequalities in load are reduced or removed (26).

That it is possible, especially in large schools and cities, to spend less money by increasing class size has been demonstrated (7, 21, 24); that such retrenchments are real economies is open to serious question; carried to an extreme they may weaken or destroy the most important values of education. Reports of present practice with respect to size of class and teachers' salaries have been issued by the National Education Association (11, 12, 16). See Tables 8 and 9.

Miscellaneous retrenchments in instruction—Reducing or eliminating pay for teachers on sick leave or absent from active service for other reasons, is presumably only a temporary measure. In 1931, 90 percent of city school systems granted some salary during leaves of absence for personal illness; 80 percent for death in the immediate family; 63 percent for visiting other schools; and 65 percent for attending educational meetings (14).

Withholding special salary increments for advanced study, and direct aid to teachers tak-

ing additional college courses, is reported by a few cities. This also may be a temporary adjustment, since the trend between 1928 and 1931 was in the opposite direction. In 1928, 12 percent of city school systems granted special bonuses for summer school attendance, while in 1931, the corresponding figure was 19 percent. The trend was most marked among the small school systems (14).

Paying salaries in twelve monthly installments has been used in some cities as an economy measure. Whether this plan will save money or not depends in large part on the tax-collection policies of the school system concerned.

TABLE 8.—SIZE OF CLASS IN CITY SCHOOL SYSTEMS, 1930-31[1]

Type of Classes	Median Class Size in:			Range of Approved[2] Class Size in:		
	47 cities over 100,000	101 cities 30,000 to 100,000	56 cities under 30,000	47 cities over 100,000	101 cities 30,000 to 100,000	56 cities under 30,000
Atypical classes	19	17	16	10 to 20	12 to 20	15 or 16
Kindergartens	33	32	30	25 to 40	20 to 35	20 to 35
Elementary grades	39	34	32	27 to 41	25 to 40	25 to 35
Junior high schools	34	29	29	20 to 40[3]	20 to 35[3]	20 to 40[3]
Senior high schools	31	27	26	15 to 40[4]	15 to 40[4]	15 to 38[4]
Senior high school classes in:[7]						
Fine Arts	21	19	15	20 to 31	20 to 30	15 to 30
Household Arts	21	20	16	16 to 30	15 to 25	15 to 25
Manual Training	22	20	19	15 to 30	15 to 25	15 to 24
Foreign Languages	26	24	22	20 to 35	20 to 30	15 to 30
Music	27	28	25	20 to 40	20 to 40	16 to 38
Science	28	28	25	20 to 35	20 to 30	15 to 30
Mathematics	29	27	27	20 to 35	20 to 31	15 to 30
English	30	28	28	20 to 35	20 to 35	15 to 30
Commercial Studies	30	28	27	20 to 35	20 to 35	15 to 31
Social Studies	31	29	30	20 to 35	20 to 35	17 to 35
Physical Training	41	42	35	25 to 60	30 to 52	25 to 50

[1] National Education Association, Department of Superintendence and Research Division. *Size of Class in 47 Cities Over 100,000 in Population.* Educational Research Service, Circular No. 1, 1931. Washington, D. C.: the Association, January, 1931. 36 p.
National Education Association, Department of Superintendence and Research Division. *Size of Class in 101 Cities 30,000 to 100,000 in Population and 56 Cities Under 30,000 in Population.* Educational Research Service, Circular No. 6, 1931. Washington, D. C.: the Association, May, 1931. 63 p.
[2] Approved means the size of class which is sought as a matter of general administrative policy.
[3] Except music, 25 to 48; physical training, 30 to 60.
[4] Except physical training.
[5] Except music, 25 to 45; physical training, 30 to 50; household and manual arts, 16 to 25.
[6] Except physical training, 25 to 50; household and manual arts, 15 to 25.
[7] The median size of class in senior high school subjects is not computed on the total distribution of classes reported in each subject, but is a median of city medians.

TABLE 9.—SALARIES PAID TEACHERS IN THE UNITED STATES, 1932-33[1]

Population of Community	Median Salary Paid Teachers in:			
	Elementary schools	Junior high schools	High schools	Rural schools
Cities over 100,000	$1,947	$2,204	$2,479	.....
Cities 30,000–100,000	1,526	1,761	1,994	.....
Cities 10,000–30,000	1,360	1,525	1,747	.....
Cities 5,000–10,000	1,217	1,376	1,575	.....
Cities 2,500–5,000	1,089	1,270	1,429	.....
Rural areas[2] (average: 1929-30)	.....	.....	.....	$926[3]

[1] National Education Association, Research Division. "Salaries in City School Systems, 1932–33." *Research Bulletin* 11: 43–55; March, 1933. Washington, D. C.: the Association.
[2] Gaumnitz, Walter H. *Status of Teachers and Principals Employed in the Rural Schools of the United States.* U. S. Department of the Interior, Office of Education, Bulletin, 1932, No. 3. Washington, D. C.: Government Printing Office, 1932. 122 p.
[3] During the period 1929–30 to 1932–33, monthly salaries of rural elementary teachers in 1,122 counties had an average decrease of 10.6 percent; salaries of rural secondary teachers in 1,013 counties had an average decrease of 10.3 percent. For further details see Gaumnitz, W. H. *Some Effects of the Economic Situation Upon the Rural Schools.* Circular No. 80, February, 1933. Washington, D. C.: U. S. Department of the Interior, Office of Education, 1933. Mimeographed. Tables 6–7.

References on Teachers' Salaries and Teacher Load

1. CARR, WILLIAM G. "Research and the Best Class Size." *Proceedings, 1932.* Vol. 70. Washington, D. C.: National Education Association, 1932. p. 143-45. Also see: *Nation's Schools* 10: 27-30; November, 1932.
2. EELLS, WALTER C. "It Would Be Unfair to Reduce Teachers' Salaries Now." *Nation's Schools* 10: 17-22; September, 1932.
3. EWAN, S. N. "Class Size." *Bulletin (Proceedings)* 40: 124-29; March, 1932. Berwyn, Ill.: Department of Secondary School Principals, National Education Association; also see *Proceedings, 1932.* Vol. 70. Washington, D. C.: National Education Association, 1932. p. 509-10.
4. HENZLIK, F. E.; RICHARDS, W. M.; IRELAND, CLIFFORD J.; and others. *Practical Economies in School Administration.* Lincoln: University of Nebraska, Extension Division, March, 1932. p. 59-88. (Educational Monographs, No. 3.)
5. HIGHSMITH, J. HENRY. "Effect of Class Size Upon the Efficiency of Instruction." *High School Quarterly* 20: 165-74; July, 1932.
6. HOLY, T. C. "How Shall Teachers' Pay Be Determined?" *School Executives Magazine* 52: 243-44; March, 1933.
7. HUDELSON, EARL. "Class Size Opinions, Evidence, and Policies in Secondary Schools." *North Central Association Quarterly* 4: 196-208; September, 1929.
8. LEWIS, ERVIN EUGENE. *Personnel Problems of the Teaching Staff.* New York: Century Co., 1925. p. 243-46.
9. LOVEJOY, PHILIP C. "Saving Money in the Personnel Budget." *Nation's Schools* 7: 96, 98, 100, 102; March, 1931.
10. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE AND RESEARCH DIVISION. *Estimating Changes in Teachers' Cost of Living.* Educational Research Service, Circular No. 1, 1933. Washington, D. C.: the Association, January, 1933. 15 p.
11. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE AND RESEARCH DIVISION. *Size of Class in 47 Cities Over 100,000 in Population.* Educational Research Service, Circular No. 1, 1931. Washington, D. C.: the Association, January, 1931. 36 p.
12. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE AND RESEARCH DIVISION. *Size of Class in 101 Cities 30,000 to 100,000 in Population and 56 Cities Under 30,000 in Population.* Educational Research Service, Circular No. 6, 1931. Washington, D. C.: the Association, May, 1931. 63 p.
13. NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE AND RESEARCH DIVISION. *Some Trends in City School Finance, 1932-33.* Educational Research Service, Circular No. 5, 1932. Washington, D. C.: the Association, May, 1932. 34 p. See also, *Supplement to Circular No. 5,* September 30, 1932. 6 p.
14. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "Administrative Practices Affecting Classroom Teachers, Part II." *Research Bulletin* 10: 33-76; March, 1932. Washington, D. C.: the Association.
15. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. *Childhood and the Depression: A Look Ahead.* Washington, D. C.: the Association, November, 1931. 42 p.
16. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "Salaries in City School Systems, 1932-33." *Research Bulletin* 11: 43-55; March, 1933. Washington, D. C.: the Association.
17. NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. *What's Ahead for Teachers' Salaries.* Washington, D. C.: the Association, 1930. 16 p.
18. SCOTT, CECIL W. "Economies in Public School Expenditures for Instruction." *American School Board Journal* 84: 39-40, 50-51; February, March, 1932.
19. SMITH, DORA V. *Class Size in High School English.* Minneapolis: University of Minnesota Press, 1931. 309 p.
20. STEVENSON, P. R. *Class-Size in the Elementary School.* Ohio State University Studies, Vol. 2, No. 10. Bureau of Educational Research Monographs, No. 3. Columbus: Ohio State University, November 30, 1925. 35 p.
21. TUPPER, CHARLES R. *Revised Teacher Load Standards in San Diego Secondary Schools.* San Diego, Calif.: City Schools, Department of Research, February, 1932. 7 p.
22. WARREN, JULIUS E. "Comparison of Cost for Supervision, Kindergarten, Supplies, Medical Inspection, Attendance Department, Summer School, Evening School, Community Centers, and Playgrounds for Representative Cities of 25,000 to 100,000 for 1929-30 and 1932-33." *Official Report.* Washington, D. C.: National Education Association, Department of Superintendence, March, 1933. p. 231-32.
23. WEGLEIN, DAVID E., chairman. *Report.* Committee on School Costs. Washington, D. C.: Department of Superintendence, National Education Association, February, 1932. p. 19.
24. WHEAT, HARRY G. "Costs of Instruction in the High Schools of West Virginia." *School Review* 26: 438-50; June, 1918.
25. WHITNEY, FREDERICK L. *The Trinidad-Pueblo Experiment in Class Size in the Primary School.* Colorado State Teachers College, Education Series Number 12. Greeley, Colo.: the College, 1931. See "Advantages of Small Classes." Frederick L. Whitney and Gilbert S. Willey, in *School Executives Magazine* 51: 504-06; August, 1932.
26. WOODY, CLIFFORD, and BERGMAN, W. G. "The Measurement and Equalization of the Teaching Load in the High School." *North Central Association Quarterly* 1: 339-58; December, 1926.

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